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²
THE ISLAND-WORLD
OF THE PACIFIC

JOURNEY NOTES

BY
OSCAR VOJNICH

TRANSLATED FROM THE HUNGARIAN
BY
ARTHUR B. YOLLAND



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INTRODUCTION.

1. In preparing my notes, I was in the main guided by the idea of putting my experiences in a popular form and of offering some sort of guidance to persons contemplating a journey in the districts I traversed.

Diary notes of this kind exclude practically all attempts to give the descriptions a character of learning: but on the other hand I could not avoid the other principle of the diarist; I was, in fact, compelled to be true to myself, and to the train of thoughts born of impressions received and of observations made. In view of the fact that the regions I traversed were mostly of the volcanic order, I may have transgressed the bounds of general interest on this point: and the same may be true of the treatment of the startling social conditions of New Zealand and San Francisco. As I am not a specialist, it is extremely likely that I have not reached the standard of work required from a scientific point of view. For any failings, fo mine in this respect, I am the first to acknowledge them: but their existence cannot by any means deter me from publishing my notes made under the influence of fresh impressions.

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2. The headings are given for the most part in due order of time and place: the only deviations in the order of time are due to the fact that an adherence to the same might have been detrimental to the sense of the description, or made it difficult to follow; e. g. in the case of the Hawaiian Islands, I have described them each in turn, and not followed the course of my travels in point of time.

3. The description, in diary wise, of the somewhat scantily known Oceanica is preceded by a general, statistical sketch in a nutshell of the various groups of islands, — sometimes in a separate chapter, sometimes in the form of notes.

4. Both the statistical data just mentioned, and the figures in general, are with a few exceptions taken from the latest official publications, or, in default of the same, from other authentic sources.

5. The distances are not given as the crow flies, except in the short general descriptions: as a rule the road measurements used for the respective lines of traffic are employed.

6. The illustrations are after photographs of my own: and the maps are copies of those already existing.

EXPLANATION OF FOREIGN TERMS AND MEASURES EMPLOYED IN THIS BOOK.

1.

The names of towns, localities etc. employed abroad are given as written in the respective country, colony, or protectorate (mention must be made of the fact that, in British and American colonies, in the case of the names of places taken over from the natives, *a* is always pronounced as *ah*, *e* as *a*, *i* as *ee* etc., i. e. the orthography used is that in vogue in most countries).

2.

Words often repeated are abbreviated; e. g. sea miles = *sm.*, statute miles = *m.*, kilometre = *km.*, New Zealand = *N. Z.* etc.

3.

Local measures are employed in all cases. Consequently, when treating of British territory, the British system of weights and measures in dealing with French territory, the metric system etc. is employed.



CHAPTER I.

ON THE WAY TO AUSTRALIA.

From Brindisi to Port Said, and, viâ the Suez Canal to Aden.

(2410 sea miles.)

On Dec. 17. 1906 I left Brindisi for my voyage southwards, by the P. and O. steamer «Osiris». Two vessels of the said company run in turns between Brindisi and Port Said. They average 19 knots an hour, a speed that rivals that of the largest liners. The «Osiris» is a ship of 1728 tons, and 6500 HP. The 930 s. m. between Brindisi and Port Said were done in 50 hours, despite the roughness of the sea.

The inhabitants of the town of Port Said, 45,000 souls in all, live in the European, Egyptian, Arabic, and Greek quarters respectively. Notwithstanding the mixed population, there is order everywhere, for the town is under British control. The boatmen, who do not understand English, are not intrusive, and do not try to «catch» fares; for the «toll» is paid on shore, at the ticket office, a fact of which we are informed by notices displayed on the boats. Notice boards equally prominently displayed contain the charges for guides, and a list of carriage fares. The first things passengers provide themselves with at Port Said are Egyptian cigarettes, for which no duty must be paid here. There is, besides, a great variety of Oriental fancy goods to be had in the shops. Driving through the town with its many-

coloured inhabitants, we may listen to a little Italian guitar-playing and submit to bad waiting at the Continental or Exchange Hotel.

From Port Said I proceeded by another P. and O. steamer, the «Mongolia», a vessel of 9500 tons burthen. Here was the grand feat of French engineering, the Suez Canal, 160 km. long! A salt-water canal in the midst of a desert, — to be accurate, not in the exact centre of the desert, since it runs past the shallow Lake Mensaleh for a distance of some 45 kilometres along the African coast, and further on crosses several smaller lakes. Sailing down the Canal by day offers plenty of variety: we were several times obliged to stop to let other vessels pass; and the stations are so many oases in the desert. On December 20, after a voyage of 16 hours, we came to anchor at the mouth of the Suez Canal opening into the Red Sea. A small tug brought the post: and then the «Mongolia» weighed anchor again.

In the Gulf of Suez, ranges of mountains may be seen both on the African and the Asiatic shore of the Peninsula of Sinaia. The reddish-yellow, bleak, and distinctly rugged hills with their conical ridges, as they loom forth through the dank mists, form a beautiful framework for the dark blue waters of the sea. The whole scene is enlivened by the steamers coming from the South and those of lesser speed accompanying us. After passing the Peninsula of Sinai we enter the monotonous stretch of unfathomable waters.

Here, flying fish make their first appearance: the smaller ones leap up beside the vessel's bows, and after flying a few paces, fall back again into the sea; while the larger ones, during a calm, sometimes traverse a distance of 200—300 feet.

On December 23, at the southern end of the Red Sea, or rather in the Gulf of Aden, islands rose to view in quick succession: and the mountain-ranges of the Asiatic and African coasts became visible on the horizon. The

hills on the Asiatic coast at first take the form of ridges running parallel to the shore: the range of mountains rising one above the other have the appearance of wings of scenery placed one behind the other. The row of ridges is followed by a series of broken, rugged ranges bounded by an island-world of solitary cliffs. This sea-coast is the unwritten history of the far-distant past: its rocks are the offspring of volcanic activity; while the sand-like deposits that seem to fill the gaps between the rocks and the valleys represent the injections of volcanic forces and the output of the bed of the sea.

I inspected the ancient mountains in the company of a well-read Englishman, a fellowtraveller. «No grass could grow here», I said. «Not grass for lawns, to be sure», he answered: «but the barren district of Aden produces no fewer than 170 kinds of plants, as proved by the collection of a friend of mine who was stationed here, which collection is to be found in the British Museum».* After steaming through the Red Sea (1395 sm.), we arrived at Aden.

Aden. Englishmen as Fellowtravellers.

On our arrival at Aden, our vessel was surrounded by boats full of black-skinned men, turbaned, fezed, and bare-headed, leaning lazily on their oars. There were people of rank too; men wearing headgear richly embroidered in gold, red, and various colours, had come to welcome some distinguished colleagues who had arrived on our ship.**

* The flora of the Peninsula, as I read in a Guide to Aden, comprise the *Dipterium Glaucum*, *Caparidiciae*, *Risida Ambylocarpa*, *Cascia Pubescens*, *Accacia*, *Churnea*, *Portutacca*, the Aden Lily with its beautiful flowers, and several other species.

** Since 1839, Aden has been a British possession. It is situated between 12° 45' and 12° 56' N. (latitude), and between 44° 50' and 45° 5' E. (longitude). It covers an aggregate area of 75 square miles, and is inhabited by 44,079 souls (census of 1901). It is subordinate to the Government of India.

Passengers for India change ships at Aden. As soon as these had left the vessel, the traffic began. Many of the boat-folk began to display tin cylinders, in which were ostrich feathers; besides, wicker-work and ostrich eggs were offered for sale. It was getting late when we left Aden. After the stir and noise of landing and preparing to sail, it was a relief to entrust ourselves once more to the safekeeping of the heaving billows of the ocean.*

* On the return journey, we arrived at Aden about 3 p. m. on May 20, 1908, and, owing to the late arrival of the boat from India, were not able to weigh anchor until after midnight: consequently we had plenty of time to inspect the immediate vicinity of Aden. The harbour-town itself (4657 inhabitants) is situated on the northern shore of the Peninsula of Aden connected with Arabia by a narrow promontory, at the foot of a steep hill. After taking tea at the two well-managed hotels of the harbour-town, the passengers drove in one-horsed covered carriages to the town of Aden (5 miles distant) and to the rain-water reservoirs.

On the carriage road that climbs the steep sides of the hill of lava formation, we meet Arabians, Somalis, Indians, and Egyptians, in their many-coloured garb. The better-off dark-skinned inhabitants drive in one-horsed carriages; and baggage and goods are transported by camels. Leaving the Jewish cemetery on the right, and the Mohammedan cemetery on the left, we pass through a defile, which is partly an artificial cutting, into an enormous crater. The latter, which is surrounded by steep walls of lava, gives one the impression of having quite recently been active. Of its bed, 5 square miles in extent, nearly half ($2\frac{1}{4}$ sq. miles) is covered by the town of Aden (17,524 inhabitants). So great is the contrast between the bleakness of the crater and the whitewashed houses dotted over its bed, with the Oriental life going on around them, that it has the effect of a fairy tale upon us: it seems as if there had not been time to build the town, and as if the houses had been deposited here from the heart of Arabia, inhabitants and all.

A few hundred yards from the southern part of Aden, all round the sides of the mountains may be seen enormous rain-water reservoirs. The 50 reservoirs of older date are computed to have had a capacity of some 30,000,000 gallons; while the 13 reservoirs restored since 1859 have a capacity of 7,718,630 gallons. The enormous basins originally cut out of the lava were lined with a kind of marble-like cement similar to that used by the builders of Pompeii. Considering that the rainfall in

As is generally the case where Englishmen are present, the passengers on our ship spent most of their time in round games. Every day, the green baize notice-board announced the state of play in the various games.

We had two concerts as well. Here Englishmen are not quite so much at home; the amateur «artistes» were not up to the standard one might reasonably have expected, but the numerous poor voices made a good choir at the services held every Sunday. On such occasions, all the passengers may be seen gathered round the tables, prayer book in hand, just as at home in the island kingdom! . . . They are at home all over the world, for they are possessed of the most precious treasure of educated men, a sober and sane human conviction that submits to the manners, customs and faith prescribed by society.

Whenever I see a British colony of this kind assembled, I make a comparison — generally very much in their favour — of their habits with those of other European races.

They live a healthy life, and think much of the conventions necessary to the maintenance of social order —

the neighbourhood of Aden is a comparatively slight one (the annual average varies between 0·5 and 8 inches), the reservoirs were in olden times of great importance: but to-day the drinking water required is distilled from sea water.

The brown, grey, and reddish lava walls have been planted with a scanty vegetation in the vicinity of the reservoirs, where a smaller species of wild pigeon has its haunts. Besides the vegetation planted here, the native vegetation of Aden too here and there shows patches of verdure; while, after rain has fallen, the succulent *Portulaca* (purslane) is dotted over the bleak surface like so many green cushions.

On the north-eastern side of the basin of the crater, a tunnel a quarter of a mile long has been bored through the lava wall. We pass through this tunnel to the shore; and from this point a second shorter tunnel opens on the road leading to the harbour-town. The shore (outer) exit of both tunnels opens on a small valley surrounded by a crescent-shaped wall of lava: to judge by the small islands and rocks that are to be found beyond this crescent, it is probable that there were two exterior craters here which assisted the large central crater in its work.

a course the neglect of which, indeed, renders social order impossible. English habits bear a racial character; they are founded on tradition. «An Englishman does not easily make an acquaintance; in point of *esprit*, his scope is, on the average, somewhat limited; he is often a bad conversationalist; but he always respects the laws prescribed by good taste. He enjoys his own chosen circle in peace. He can eat, talk, and behave like a gentleman; is no friend to precipitation; takes no particular interest in the tightness or looseness of his neighbour's clothes, in his highly coloured tie, or in any other easily exceptionable deficiency of his. This is not the case with the upper circles only — for then the description could not be applied in general to the passengers of a large ship —, but with every man who has a decent coat to his back.»*

It is only among individuals of such a nature that Europeans of better taste can feel at home and at peace on a long voyage: for there is nothing more disturbing to the nervous system than to have to spend weeks in the society of people who have no respect for social conventions, are not choicer in their language and do not attempt to control their emotions, i. e. men who know no limits except those prescribed by themselves. During a period of this duration, their ungainliness, their loud talk which throws them into prominence everywhere, and their insolent manner of staring at ladies, are thrown more into relief, as well as many other excesses characteristic of hectoring Europeans.

Christmas Day was celebrated by a masquerade. A prize was offered for the prettiest dress, another for the funniest one, and another for the best dress made on board. The observations I had made while on the ship made it easy for me to imagine who would stick to even-

* The same may be said of the English inhabitants of Australia and New Zealand.

ing dress, and led me to speculate as to what national costumes the other people would resort to. My ideas as to the former proved correct; men of my own age and those who were older preferred the swallow-tails: but my presumptions as to the latter proved in many cases incorrect; and my error, more often than not, gave an air of comicalness to those fellow-passengers not dressed in the expected manner.

During dinner the usual air of formality was exchanged for an unconstrained familiarity suitable to the festive occasion. Everybody sipped champagne: and no-one refrained from turning round to inspect the costumes of those sitting behind. To judge by the sound of belated footsteps, on this occasion the Englishmen celebrated Christmas with due fervour.

From Aden to Colombo.

(2093 sea miles.)

Colombo.

On the way from Aden to Colombo, we sighted land three times, — on the 24th the hills of Socotra, on the 28th the Laccadive Islands, and on the morning of the 29th, in the distance, the hills of India.

Flying fish were to be seen in shoals all over the Arabian Sea; on the morning of the 29th we met large shoals of delphin-like fish; and three whales also hove in sight. The evenings were moonlit: consequently the phosphorescent animals were unable to assert their illuminating capacities. Apart from the gulls in the harbours, and the large quantity of different birds of prey in the Gulf of Aden, the only feathered creatures I saw were three gulls.

On the 27th, at sunset, a deep tinge of red flooded the clouds fringing the horizon; and the red light was reflected in the form of opal-like rose-coloured rings on

the slightly rippled surface of the ocean, which though no breeze was stirring, seemed unconsciously to heave. Should this enchanting colour effect be reproduced by an artist, no-one would accept it as natural, it was so much out of the way. Later on I had often an opportunity of observing similar colour effects on the peaceful surface of the tropical seas.

On the 29th, in the afternoon the island of Ceylon rose to view on the East.*

In the harbour of Colombo, the Capital of the Island, first of all large steamers from all parts of the world attract our attention: owing to their deep draught they are obliged to anchor a few hundred yards from the shore. A speciality of the harbour of Colombo is a kind of raft as broad as a boat, made of two or three carved beams of wood. On these the brown-skinned natives may be seen kneeling or rather squatting, in twos or threes: and repeatedly shouting «all right», they beckon to us to throw silver coins into the sea. Being clever divers they soon bring them to the surface.

Landing at Colombo is a far more disagreeable process than in many out-of-the-way places. Small, decked steamboats come to fetch the passengers: and nothing can induce them to start until passengers and hand baggage are packed into the foul and close «holds» like sardines in a box!

In my desire to enjoy fresh air, I drove straight from the landing place to the Hotel Mount Lavinia situated on the shore, at a distance of seven miles. The road leading parallel to the sea is flanked on both sides by gro-

* The British colony of Ceylon is situated between 6° and 10° N. (latitude) and between 80° and 82° E. (longitude): it comprises an area of 25,481 sq. miles. Its greatest length is 271 miles; its maximum breadth 137 miles. It contains 3,500,000 inhabitants (2,300,000 Singalese, 950,000 Tamils, 230,000 Moors, and 6000 Whites): of this number 156,000 inhabit the Capital.

cery and haberdashery booths kept by natives. On the way we meet vehicles drawn by miserable hacks and tiny, short-horned cows: even jinrikishas may frequently be seen. And if we add to the picture the pedestrians with their brown skin, their carbuncle-coloured eyes, and their many hued garments, — we can form an idea of tropical Colombo. The other side of the picture is offered by Nature: she is represented by the breadfruit tree (*artocarpus*



Road leading from Colombo to Mount Lavinia (Ceylon).

incisa), which yields a fruit of the size of a man's head, the jack (*artocarpus integrifolia*), the *ficus religiosa* (sacred tree of the Buddhists), the palms and many species of brilliant-hued flowers etc.

The Hotel Mount Lavinia is frequented by passengers for the most part at dinner time. Arriving in the full heat of day, they make a good meal and return to Colombo without having inspected the luxuriant woods and flowery

fields of the immediate vicinity. I am glad I did not follow their example, but made the excursion in the manner I had contemplated. My decision enabled me to spend the night in a comparatively cool place: and I awoke to find myself among palm-trees bathed in sunlight.

On the morning of the 30th, while walking on the shore, I was struck by the outriggered boats of the natives lying on the beach, and belonging to a fishing colony. The lower part of these boats, that which is under water, is cut out of the trunk of the waterproof and very hard «jack»; and the sides of the boats, of remarkable thinness, are fastened to the same. The interior depth of the boats practically reaches to the knees: their breadth is about a span, so that it is impossible to sit in them without crossing one's legs. The boat is connected with a tree trunk lying parallel to the same and carved at both ends, by three strong poles. As a consequence, both the boat and the trunk, which is several yards off, are well balanced: and the boat is converted into a pretty safe means for a struggle with the surf that generally beats on this coast.*

In order to observe the natives fishing about a mile from the shore, I myself entered an «orue». I must confess I have had more comfortable seats than that offered by an «orue». Two men sitting in the bow and at the stern respectively propelled the boat: while a third who had come with me, settled down beside me on the centre pole. Considering that, besides the heavy shell, the boat has no

* I have seen deep outriggered boats similar to those in Ceylon, in the neighbourhood of New Guinea. In the southern islands of the Pacific too, outriggered boats are made: but the latter are cut out of one piece of wood; they are only half as deep; and instead of the trunk fastened to the boat, there is a pole about half the thickness of an arm or the stem of a tree. Among the islands of the South Sea, outriggered boats are for the most part used on the smooth water inside coral (barrier) reefs.

ballast, apparently the object of this third fisherman sitting on the centre pole was to keep the balance.

The fishermen were catching small fish with hooks. Freshly caught fish was put on the hooks as bait; or rather, bitten pieces of fish, for the natives used their teeth to cut them up. Most of the fishermen wore light straw hats: the necks of those who were bareheaded were protected against the sun's rays by their hair tied in a tuft.

My first boatman was an intelligent Singalese (to judge by the comb in his hair), who spoke English fairly well. His name was Antonis, a name which sounded strangely in my ears on the island of Ceylon! I asked him what was the native expression for «good morning»? «Aibon», was the answer. And for «good appetite»?* «Buomo handei», he replied. Both «bon» and «buomo» point to a Latin original: consequently the Portuguese colonists or rather missionaries of the XVI century, if they left no other traces of their presence here, at least contributed to the vocabulary of the island.

I returned from Mount Lavinia to Colombo along a road flanked by villas: and I visited the Museum which is to be found on the way. Both the ethnographical and the zoological departments of the latter, consisting of collections from the island of Ceylon, are very well equipped, and possess an abundance of specimens.

In the Museum are to be found several living specimens of an insect called the *pulcriphyllum crurifolium* (its English name, «living leaf», is particularly apposite), which is a parasite of the guava tree.

This insect, which is like a double green leaf, cannot be discovered unless it moves or unless, being in its immediate vicinity, we catch sight of its head.

* An expression used on the Continent by friends meeting before meal-times, meaning, «I hope you will make a good meal». Like the «to your health» in use after meals, it has a strange sound for English ears, and seems as curious as the custom of shaking hands and kissing the hands of elder ladies accompanying the latter wish.

I took a seat in the terrace of the Grand Oriental Hotel, just opposite the harbour of Colombo. It may be said that this terrace is the rendezvous of all tourists going to and coming from the East. Not a day passes without one or two ships arriving in Colombo. The majority of the passengers of ships arriving in Colombo from Europe, Australia or Asia, or from other ports, put in an



Buddhist Temple near Mount Lavinia (Ceylon).

appearance in the «market hall» of the Grand Oriental Hotel, — for this terrace is actually as big as a bazaar. The moment we sit down, Singalese and Moorish dealers crowd round us: one offers jewellery, another silk, a third inlaid articles etc. At first the bustle is amusing: later on it is annoying; though, during a sojourn of a day or two an observant visitor can find plenty of new material for observation in the different behaviour shown by the pas-

sengers of various nationalities. That is how I passed my time during my second stay here (May 9—14, 1908).

The Buddhist religion forbids the destruction of animals, a prohibition that is responsible for the enormous increase, in the neighbourhood of Colombo, of the number of jackdaws and crows, the terribly noisy cawing of which disturbs the quiet of the place. It begins at dawn, rudely awakening the exhausted travellers, oppressed by the heat, from the sleep which comes to them so late at night. Otherwise the white-eyed creatures are a source of amusement: wherever they see any likelihood of getting something to eat, they hover about until the time of stealing approaches; while the cunning birds that roost in the neighbourhood of Mount Lavinia catch any bits of food thrown to them, with the skill of a trained hound.

CHAPTER II.

IN AUSTRALIA.

From Fremantle to Perth.

(Distance from Colombo to Fremantle, 3128 sea miles.)

We crossed the Equator on Jan 1: on the 3rd we crossed the tenth latitude, and therewith left behind us the salt Turkish bath atmosphere which had haunted us ever since we left the Red Sea. The temperature in my cabin was indeed never above 22° R. (in May 1908, the thermometer, however showed 90° F. = about 26° R.), a heat not unusual in Europe in the summer months; and it is not so much the heat of the sun as the hazy air that makes travelling near the Equator so disagreeable. The salt humour penetrates into our clothes; makes cigars kept in open boxes unsmokable; softens sized paper; damages photographic films; in a word, is no pleasant companion for 12 days or so.*

With its 1800 inhabitants, Fremantle is the most bustling harbour of Western Australia: it is the first stopping place in Australia for most ships arriving from Europe by the Red Sea. As this place offers nothing of particular

* On my way back, the cold nights spent on the Mediterranean reminded me that I should soon be obliged to spend the nights for months with closed doors and windows. I longed again for the nights of the tropical seas: for anyone who has tasted the luxury of rest with open doors and windows and of sleeping at night on deck, considers no climate ideal which requires the use of warm wraps.

interest to tourists, the majority of the passengers took the train to Perth, the Capital of Western Australia, which is 12 miles distant.

Over the seats in the comfortable railway carriages, besides photos of the agricultural exhibition and cattle market, there was a notice, published by the Western Department, which at once attracted my attention. This referred to the damage done by certain passengers to the property of the railways, and called upon the travelling public to report any similar proceedings. So it seems that the miners attracted by the gold of Western Australia, in their eagerness to line their own pockets, are quite indifferent to public interests? . . . a fact which indeed is not surprising in the case of obscure individuals whose very existence depends upon «the fortunes of the play».

On the way from Fremantle to Perth I had the opportunity of experiencing another thing that is quite characteristic of Western Australia. At the first station where we stopped, a man apparently between 50 and 55 years of age entered our compartment: finding my neighbour was an acquaintance of his, he began to talk to him in a loud tone. At first he spoke of England: then, after some questions about Australia, the conversation was changed to a debate about the economic conditions of the latter country. The Australian very soon warmed to his task, as if he had been delivering a speech in Parliament: he praised the fertile soil, the climate, and the civil liberty of Australia. As my neighbour got out before we arrived at Perth, for the rest of the journey his harangue was addressed to me. Apart from a tinge of chauvinistic bias, I believe this worthy native of Western Australia is acting in the interests of British colonisation.

How far this encouragement to settle in the country has become part of the popular system of Western Australia is quite evident to anyone perusing English books of travels relating to the same: — in every book of the kind

we are met by stories of hundred-grained wheat, onions the size of a man's head, potatoes big enough to satisfy three persons, and other similar miraculous products.

On the broad straight roads of the watering places and villages that are to be found in the twelve miles separating Fremantle from Perth the ground floor or one-storied houses built of wood and provided with terraces stand at some distance from each other.

In 1871 Perth contained 4500 inhabitants: at the Census of 1903 its population numbered already some 45,000 souls. The broad macadam roads are flanked by rows of trees. Most of the houses are one-storied, with the exception of the public buildings, the palace of the Governor and a few private residences. Here too wood is the predominant building material: the roofs are covered with tin.*

Under thick-foliaged trees, in the town park of Perth with its green swards and little ornamental lake, the members of the fair sex may be seen reclining in white summer dresses: while in the vicinity of the park, on the river Swan, groups of black swans, pelicans and other water-fowl bask in the sun.

I «did» the town in a hansom cab, looking in at the Museum and visiting the West Australian Agricultural and Mining Exhibition, which had been opened a few days before. Owing to the short time at my disposal, I could gain general impressions only. Among the species of wheat exhibited, the large, oval-grained, pale yellow species predominated; the species of maize grown is the yellow big-corned; the species of oats produce grains that are thin but wiry. The ears of wheat exhibited were almost without exception of the beardless species. Potatoes and other garden vegetables are very productive: but the species of fruit would scarcely be able to compete with European fruit.

* Building with wood and roofing with tin is general among the Europeans living in Australia, New-Zealand, and the Islands.

As the Exhibition was confined to the products of Western Australia, it must naturally be judged as such.

After driving round the town I went to the Esplanade Hotel overlooking the river Swan, for a late meal. The neatly dressed English waitresses in the dining room reminded me of the Swedish restaurants.

The first floor terrace of the Hotel opens onto the sport grounds situated in front of it: while beyond, sailing yachts might be seen on a lake-like expansion of the river Swan.

The landing place of the steamers plying between Fremantle and Perth is a few hundred yards distant from the Hotel. From here we sailed back to the «Mongolia».

There are several bends on the river Swan between Perth and Fremantle: the hilly banks are flanked with trees.

From Fremantle to Adelaide.

(1353 sm.)

Adelaide. — Brief Characterisation of the English Inhabitants of Australia.

In the harbour of Fremantle, besides the common gull, I saw a few cormorants and ducks. On the open sea no gulls were to be seen in front of Fremantle, but after leaving the latter, they again appeared in considerable flocks. They probably haunt the cliffs, from which they start on their fishing expeditions. The first three albatrosses we met were seen in the wake of the ship on Jan. 9., off Cape Leeuwin in S. W. Australia.

On the morning of January 12, on the 36th latitude S., leaving Kangaroo Island to the East and the Investigator Peninsula to the N. W., we entered St. Vincent Gulf. To judge by the distance still to be traversed, we could not arrive in harbour until 4. p. m., a fact that would leave only an hour or two to be spent in the capital of

South Australia: consequently I gave up the project of sailing on to Melbourne. I was extremely sorry to have to make up my mind to leave the large floating palace where, in the pleasant company of Englishmen, I had felt as one can only feel among polite and good-tempered gentlemen.

The big steamers anchor outside the harbour, which is 8 miles distant from Adelaide: the passengers are taken ashore by a tug. We took our places on the little boat as best we could, with our eyes turned, not on shore, but on the «Mongolia», on the deck of which the passengers who had stayed behind stood in groups, each group having some acquaintance among those leaving. Friendship made on starlit nights in the Northern and Southern Hemispheres united the kindred souls with the ties of many a pleasant recollection: and that is why it was so difficult for us to bid farewell to the «Mongolia».

From the port of Adelaide a railway line leads to the town. As the carriage of parcels is undertaken by carriers, most of the passengers — among others myself — entered the train unencumbered with luggage. On my arrival I at once went the round of the town. The streets were deserted, most of the shops were closed: that is the custom on Saturday afternoons in Australia. In the evening the public swarmed in the main thoroughfares by the light of the shop windows (the streets would otherwise be poorly lighted): while the dark, narrow side streets were unfrequented in the evening too.

There is very little carriage traffic: partly for that reason, but more still owing to the macadamised surface of the wide main streets, we must not put up here with the nerve-killing noise of carriage wheels. In two *al fresco* restaurants situated close to one another in one of the main roads, brass bands were playing lively airs, — this road is the concert promenade of the Saturday public. In another street the Salvation Army was preaching edification; while

at the corners of the side streets, beside small tables, hawkers were chaunting the praises of their goods. The evening scene was enlivened by two travelling restaurants.

If I were to read all this in a book, I should be inclined to compare it with the life in America; but as a spectator I gained no such impression. The conduct of the Australian public is more discreet than that of the American crowd.

On Sunday I made excursions; on Monday I visited the Museum and made purchases. Everywhere I met with the greatest courtesy. In the shops the goods were never offered; no-one tried to prevail on me to buy; the praises of the wares were not chaunted; they served me with what I asked for, whether my purchase was for a shilling or for a larger sum. The prices are moderate enough. Not only were my enquiries answered; but the directions given were most exhaustive.*

In the inner part of Adelaide, as in Perth, the houses (which are for the most part one-storied) are provided with a covered pavement, the roof resting on pillars. The city proper (i. e. the inner part of the town) is surrounded by a villa quarter connected with the same, after which follow so-called parks, fields and meadows reserved to the inhabitants. The parks, which cover an aggregate area of 2000 acres, are the lungs of the town, as a well illustrated local guide very properly remarks. According to the said book, no less than 212 sporting clubs have already received permission to play cricket, football, golf, polo, lacrosse, hockey, lawn tennis and other games in the parks.

* I had the same experience in the other Australian towns too. Australians are communicative and impulsive, a point in which they resemble the Americans: but in other points they more nearly resemble the English in disposition, having preserved the good characteristics of the English race much better — they do not live by humbug or by «taking in»; on the average they are better read than the Americans; and Australian business men seem to be quite reliable.

The public buildings, — the Museum, Picture Gallery, Hospitals, Schools, — are situated by the side of some wide road, and are surrounded by gardens. The pearl of the gardens of Adelaide is the botanical gardens covering an area of 40 acres. It is an English park with tasteful groups of trees and flowers, ponds and lakes, conservatories, and a well organised museum of agricultural



Pond of the Botanical Gardens of Adelaide (Australia) producing 150 kinds of lilies.

botany. Of the various sheets of water there is one round pond planted full of water lilies which in particular attracts our attention. Here 150 species of water lily are represented, — a glorious show of colour.

The gardens have been in existence for 50 years: but the trees look 100—150 years old, a fact which is the best proof of the wonderful fertility of the red loam

Adelaide. At the entrance to the gardens (as everywhere in Australia) our attention is riveted by a notice board with the following rules (among others):

1. Only children of a certain age are allowed to go into the garden without escort;
2. Smoking is prohibited;
3. Topsy visitors will be turned out.

In the Town Park, which forms the continuation of the botanical gardens, life is very bustling on a Sunday afternoon: the band of the Salvation army is playing in one spot, in another a political speech is being delivered, — all with the peace and tranquillity to be expected from the English temper of the people.

The ethnographical collections of the Museum afford a complete conception of the clothing, arms, and handicrafts of the aboriginal inhabitants of Australia: and the comparative collection of skulls is quite good. The same may be said of the zoological and mineralogical collections. The picture gallery is in a separate building. A common subject for pictures by Australian artists in the portrayal of agricultural life. The soul of these artists too is permeated by the conviction that the future of Australia lies, not in the gold mines or in getting rich quickly, but in an exploitation of the richly fertile soil with which primitive nature has endowed the country.

The productiveness of the Adelaide district is striking to anyone who drives to the neighbouring Lofty Mountains. In the gardens by the roadside, in the valleys, the vegetation is luxuriant and of a dark green colour: European species of trees planted 60—70 years ago display trunks that seem to point to a growth of centuries. I had never before seen greener, larger or more leafy specimens of willows growing on the banks of brooks. In the neighbourhood of the Lofty Mountains the cherries had already been picked, the apples were just ripening. It was a curious experience for a European to see the beginning of

summer in January, and that too with an almost similar vegetation to that familiar to him at home.

The water layer must be deep down below that of red schist; for nowhere could wells be seen. To take their place, the whole mountain district is covered with water conduits. Water taps may be seen not only about the houses and in the gardens, but even in ploughed fields and meadows. Beside the water pipes iron drinking troughs are to be found. The extensive network of water conduits is fed by pondlike reservoirs situated at a considerable height.

From Adelaide to Melbourne.

(483 miles.)

Melbourne.

In Australia, Sunday rest affects even the necessary regularity of railway traffic: so there is no train leaving Adelaide on Sunday to arrive in Melbourne on Monday.

I left for Melbourne in the afternoon of Jan. 14. On the way between the Capitals of Western Australia and Victoria, a distance of 483 miles, I saw corn fields in three stages — according to the height of the respective country —, viz: ripening, ripe, and already cut down. The majority of the latter were covered by low stubble, as in Hungary: but I saw very few fields where harvesting machines were used.

Of the existing graminaceae, wheat was represented almost without exception by the beardless variety: the oats seemed to produce an abundance of fine grains. The general aspect was quite different to that of agricultural districts in Europe. The fields under cultivation were broken up by large expanses of untilled land or of such land as was still subject to the consequences of the extirpation of forests. As prescribed by law, the several estates

were marked off and surrounded by wire or wooden fences. The farm-houses, which were situate far apart from one another or clustered together in little settlements, were surrounded by groves recently planted, or by gardens. Everything pointed to the youth of the country: and warmth seemed to be supplied to the homes only by the carefully tended flowers that grow around them or in the windows.



One of the main thoroughfares of Melbourne.

Melbourne, the Capital of Victoria, was founded in the thirties of last century: today it has 515,000 inhabitants. Like Fremantle, Perth, and Adelaide, Melbourne too is built on hilly ground.

The streets of Melbourne wear the character of those of a great city: between the one and two-storied houses are wedged in large buildings of the American style, a fact which however does not destroy the Austra-

lian character of the whole. The life is similar to that in Perth, Adelaide, or Ballarat: the streets, macadamised, wooden or asphalt, are quiet; the people are of a peaceful nature; strangers are not besieged in the shops; the Saturday evenings are like those I witnessed at Adelaide. The main thoroughfares are full of life. Till late at night the bands parading before the hotels play serenades: the public crowds to the spot, and the Saturday evening promenade concert — in the streets — requires nothing more to make it complete.

That part of the treeflanked boulevards outside the town proper, intended as promenades and for riding, is here and there ornamented with flower-beds. A wide and beautifully-kept road of this kind leads out to the botanical gardens, which are situated at a distance of $2\frac{3}{4}$ miles. On a mound before the gardens stands the Governor's palace, in a park of 61 acres in extent. The botanical gardens are the continuation of this park and, together with a lake of 10 acres, cover an area of 93 acres: they contain no less than 14,000 species of trees. Besides the gardens surrounding the town, the squares are ornamented by flowers. We may therefore justly call Melbourne «the town of gardens».

Beside the botanical gardens stands the observatory and the meteorological institute. The observatory possesses five large telescopes — each in a separate building —, four for astronomical purposes, one for photographing the celestial bodies. The instruments for registering seismographic and meteorological records and for marking terrestrial magnetism are of the latest type, fitted with automatic recorders.

In the Museum the arms and hunting implements, the products of the domestic industry and the agriculture of the inhabitants of Australasia, are to be found, arranged in classes, each class containing those of kindred islanders or groups of islands.

One of the greatest sights of Melbourne is the Flemington race course. The course is situated in the hollow of a valley, surrounded by a hilly ridge as by an amphitheatre: the stands are built on the side of the hill, and offer a complete view over the whole course from every point. As it is the fashion here to lunch on the course, the dining rooms are very spacious. The same may be said of the long row of dressing rooms, which are thoroughly well equipped with every necessity. For the governors of the Commonwealth and of Victoria and their suites, there are separate rooms. It is a good thing that their boxes have not been placed at the two remote ends of the grand stand: otherwise one would involuntarily be reminded of the fable of the dog and the cat. A useful institution is the plan to be seen at the entrance to the stables: this plan shows, in the case of each race, which numbers the respective horses occupying the numbered boxes are running under. It is in a good position; is of great service to the public; and saves the owners and staff of servants from many unnecessary questions.

The small hospital for jockeys, with its fully equipped operating theatre, its double-bedded room ready to accommodate in-patients for several days, and its kitchen, is quite a novelty on a race-course.

One of the exercise grounds is a mile and a half long, and is covered with sand: the other, of the same length, is covered with tan.

I had already heard of the high standard of racing matters in Melbourne: but I must confess I was surprised by the completeness and extent of the equipments.*

On the Flemington course, the main season commences in spring, on the first Tuesday in November: the

* Horse-racing is on a very high level both in Australia and New Zealand. There are annual races in the British colonies on the islands too.

four days' meeting at New Year and, in autumn, that of the first week in March, attracts a considerable number of visitors.

I was shown round the race-course by the superintendent of the course, who resides there permanently: he took me to all the localities, explaining everything we saw.*

Ballarat.

(74 m. from Melbourne.)

On my way to the town of Ballarat of gold-mine fame, I more than once heard, through the open window of the railway carriage, the word «paper» spoken by somebody at the side of the line. One of my companions looked out and threw his newspaper smilingly out of the window: after a few moments another neighbour did the same. It was the farmers living on the railway side asking for newspapers, as a means of getting fresh news in the quickest and cheapest manner possible.

I drove down the broad main street of Ballarat to Craig's Hotel. The owner of this hotel is an important citizen: at my request he went to the telephone, rang up the manager of the East Star mine, and asked him to permit me to view the same. The answer was that I might come at 3. p. m. In the meantime I whiled away the time looking at the Museum and the Mining Academy. Over the latter I was shown by a young student, who first offered me a topographical survey, from the balcony of the Academy, of the spots where goldwashing was started, where the large nuggets were found lying under a layer of dust, practically without any implements; then

* In Australia, foreigners meet with the same courtesy everywhere: while the tourist offices subventioned by the state absolutely swamp you with useful information, and, in addition, supply you with well illustrated guide-books, — all gratis and free of charge.

pointed to the dilapidated wooden towers of the already exhausted mines, and the new towers, and explained the topographical situation of the old and new shafts. Next he proceeded to elucidate the processes of gold-washing and smelting, with the aid of the experimental machinery for that purpose belonging to the institute.

After acquiring this preliminary mining knowledge, I set out for a drive and walk past the villas surrounding the town and in the botanical park. One of the conservatories of this park has been filled with flowers of a fiery red colour, — a sight the charm of which was to be seen by the expressions on the faces of the ladies who were looking at them!

At the appointed hour I presented myself at the East Star mine. The manager took me round the machine rooms fitted with machinery for working lifts, pumping water and air: then, putting on waterproof clothes, we took our places in a lift. The latter was, to be sure, not made for comfortable travelling: the sides next the walls are open, while the two poles meant to serve as props for the arms do not offer sufficient support to anyone using this structure, that is very unsteady when it descends or ascends suddenly. We entered a drift 2200 feet deep: the miners were working 800 feet farther in. The shaft is very well ventilated: the temperature is only 22° R., but there was a damp heat, that acted like a Turkish bath. The miners are stripped to the waist, and, while working, throw water (brought from the surface in pipes) on the upper part of their bodies.

I ascended «full pace» with the manager, reaching the surface in 4½ minutes. We made our exit, therefore, in record time, like good sportsmen.

In Ballarat, in the factory of H. V. Mackay, is manufactured the «sunshine» harvesting machine invented by the owner of the factory himself. — This machine cuts down ears of corn, thrashes it while in motion, and

puts the grain into sacks. It is able to finish about 15 acres a day. The reaping of corn-land by this machine costs about one shilling only an acre, apart from the consumption of oil and the losses due to the rending of sacks. The harvesting machine patented in 1894 covers a width of 6 feet: since 1905, the factory has been engaged in the manufacture of the so-called «sunshine pusk» machine, covering a width of 11 feet, with which it will be possible to reap 35 acres a day.

As the Australian farmers told me, the stubble left after the fields have been traversed by this machine, causes a good deal more trouble than that left after the corn has been cut down stalk and all: for among the stalks that are thus left standing weeds luxuriate and spread rapidly.

CHAPTER III.

TASMANIA.

Launceston

(277 sm. from Melbourne).

Hobart

(133 m. from Launceston).

Our ship, which left Melbourne at 5 p. m., was next morning steaming up the Tamar, the largest navigable river in the island of Tasmania.*

On the hilly shores of the island, forests of eucalyptus trees, in places entirely burned down, in others with scorched trunks, may be seen; here and there small pasture-lands and farms lend a variety to the scene. After sailing some 40 miles over fresh water, we arrived at the town of Launceston. This town, situated on the side of a hill, was founded in 1807: today it is the staple of the commerce of Tasmania, and contains 23,000 inhabitants.

As I had no time to waste, I went straight to the tourist office. The Tasmanian Tourist Society is under the

* With the neighbouring islands Tasmania covers an area of 26,215 sq; miles: it is situate between the 40° 41' and 43° 38' latitudes S., and the 140° 30' and 148° 30' longitudes E. Two mountain ranges traverse it, one from N. to S. for a distance of 40 miles from the east coast, the other on the West. The space between the two ranges is covered by a plateau with several fresh water lakes. The climate is temperate. According to the Census of 1903, it contains 179,487 inhabitants. The last of the aborigines died in 1876. Since 1882, it has been a separate colony under a Governor appointed by the Sovereign of England. Politically it is united to the Australian Commonwealth. Children of from 7—13 years of age must attend school.

patronage of the Government: it offers lavish information on all points to strangers. A good local guide, well illustrated, was thrust into my hand; I was instructed what to look at, and in what order my visits should be paid, and what the cab fares were. Consequently I was able to start to make the best use of the time at my disposal without loss of time, with a plan of campaign ready to hand.



View of the Gorge near Launceston (Tasmania).

In the gorge stretching two miles away from Launceston, considerable variety is lent to the scenery that is displayed to our view as we pass along the footpath, partly cut out of the rocky bank, partly made by blasting, by the rushing stream, the piles of boulders, and the eucalyptus woods.

In sunny weather the crickets' chirping makes a deafening noise, though its slender tones are overwhelmed

by a louder voice, the cadence of which reminded me partly of the peeping of the guinea fowl. I wondered what insect it might be: and my eyes were riveted on the first songster I saw.

An enormous fly, of the size of a man's thumb, with transparent wings, was settled on the branch of a tree. When I stopped near it, for a moment it was silent: but it soon began again to discourse its melody.

Desiring to get a nearer view of the creature, I struck at it with my stick: but the blow was intercepted by the branch and the fly was off. As it flew away, it uttered quite a different sound, — I might almost call it a tone of terror. All my further attempts to find the crying cricket proved a failure.*

In that part of the gorge nearest to Launceston, the vegetation becomes more luxuriant; tall grass and ferns adorn the side of the valley, while round the benches placed here and there, man has come to the assistance of Nature. This is the favourite resort for excursioners from Launceston.

I took the express from Launceston to Hobart. The train went well enough on the narrow-gauge track: but, as it passed 22 stations, and hardly omitted to call at any of the 10 conditional stopping places, it did not cover the distance of 133 miles under 6 hours. In a district so thinly populated, every encouragement has to be given to even the smallest settlement: the stations where the express stopped are nearly all such.

With the varying shapes of the hills visible in the distance, the scenery of this route was finer than that on the way to Launceston. Here too the railroad track is flanked by woods of eucalyptus trees, either burned down

* As I observed in 1908 in the Philippines, a similar large species of fly living there is equipped with a protuberance of the form of an under-wing, similar to a utricle, situate under the transparent wing: and it is this that produces the sound.

or with scorched trunks. On the trees in the woods surrounding the farms, almost without exception, a few inches off the ground, rings some inches deep and wide, cut with axes, may be seen. The tree thus deprived of its sap dries up within a year or two, when it is felled and sold as firewood, — the eucalyptus tree being soft wood. This has only been the case recently, however, since wood has been marketable in the larger towns. Formerly everything was burned out with a view to making the soil cultivable as soon as possible.

Hobart, the capital of Tasmania, contains 32,000 inhabitants, and is situated on a bay sheltered by islands. On the land side, the basaltic rocks of the Wellington mountains form a picturesque background. Of its flower gardens, the finest is the botanical gardens situated high up on the shore of the bay, in the vicinity of the Governor's park.

Excursions from Hobart to Mount Wellington and to the S. E. end of the Island.

Of the places of resort round about Hobart, the most frequented is the Wellington range of mountains, particularly a fern alley situated in one of its loftier valleys. All around, on the hill-sides, lie trunks of trees, to which the verdant valley overgrown with palm-like ferntrees presents an absolute contrast. Farther up on the road that winds up the side of the hill, splendid views can be obtained over the scorched forest right down to the open sea.

I made an instructive excursion from Hobart to the south-eastern extremity of the island. I took the train from the village of Belleville on the shore opposite the bay, to the village of Sorell some 10 miles distant, from where I continued my journey in a one-horsed carriage.

After the cultivated fields lying round Sorell, we find a mountainous district covered with woods. Along the

well-kept road, here and there farms may be seen: but, as night soon came on, by the light of the stars, I could make out nothing but the white trunks of dead and dried eucalyptus trees.

At 10. p. m., we arrived at the station of Dunalley, which consists of a few farms. Here I spent the night, in a clean and well-managed little hotel, At 4. a. m., I continued my journey with a fresh horse. The driver, who was an



View from Wellington Hill, near the Capital of Tasmania.

Englishman by extraction but had been born in Tasmania, was of great use to me in explaining my whereabouts. Hardly had we proceeded two miles when he called my attention to the sand layer stretching for some way along the side of the hill. Considering that farther on, on the ridge of the hill, marine conchites are found, it is evident that this mountainous district was at one time below the surface of the sea.

At sunrise, the flutelike tones of the Australian magpie and the common jack-bird of Tasmania, blending with the chattering of the thrushes, instils some life into the peaceful quiet of this uninhabited district. As the air got warmer, small greenish parrots appeared in large numbers: I saw also three large black cockatoos, which pursued each other with a noise like the croaking of kestrels. On the road we saw some large lizards basking in the sun: my driver was



Remains of a forest burned down, with signs of fresh life.

inclined to take the snake-track to be seen in dust for the trail of the poisonous black snake.

The primeval bush had in most places been exterminated: when the dry brushwood is set alight, many large trees fall victims to the fire, or, if they escape destruction, their trunks are covered with huge charred scars. So the woods we saw while sailing up to Launceston and in the train on the way to Hobart were mostly remains that had been cleared of undergrowth.

The scorched, ash-covered ground is without more ado sown with grass seeds; and the fields, that are soon verdant, are first used as pasture-lands for sheep. In districts where the soil is more fertile, the trees are first cut down, or, if not marketable, burned out, — then the land is ploughed. The most characteristic are those small farms which the tenants or owners are just beginning to cultivate. Here as a rule, beside a small kitchen garden stands



The «Tesellated Pavement».

a little wooden dwelling: in the vicinity a few flowering shrubs, in the window red flowers, — and all around a waste: yonder blackened tree trunks lying on the ground: a little farther on virgin forests with their gigantic trees and impenetrable «bush».

At the first sight of this devastation of Nature, we feel an infinite sorrow, but when we catch sight of the gardens of the more advanced farms planted with useful

trees, the splendid pastures that have replaced the useless bush, and the ploughed fields, we become reconciled to the present state of affairs.

After driving for three hours, I arrived at my destination. Eaglehawk Neck, some 30 miles distant from Sorell, was the very first settlement in Tasmania: today two old houses are the only remains left of the colony once occupied by deported convicts. But my reason for going there was not to visit the scene of these anything but inspiring recollections: it was, in fact, to examine the so-called tesellated pavement on the shores of the sea.

Here a part of the shore, which is otherwise shingly, is composed of flat rocks, with oblique and cross crevices that give one an impression of the huge boulders having been laid side by side by the hand of man. The steep ascent behind the pavement is composed of a kind of sandstone schist in layers, from 15—25 metres in height. The stones contain a large quantity of remains of marine shells and vegetation. Near to the tesellated pavement, in a splendid situation, stands the Lufra Hotel. Both the Tourist Society and the shipping companies running boats to Tasmania, are said to subvention this hotel as well as the small one previously mentioned; and in fact no other cause can be assigned to the fact that for a very moderate price excellent board and lodging can be had there. I returned to Hobart the same way.

From Hobart to Bluff (New Zealand).

(930 sm.)

Milford Sound.

We sailed from Hobart to Bluff, a harbour in New Zealand with a southern aspect, by the S. S. «Riverina» the property of Huddart, Parker and Co. The greater part of the over-crowded boat was taken up by passengers with tickets at reduced fares going to the Christchurch Exhibition.

On Jan. 28., we were off the west coast of the South Island. In the distance, through the early morning mists, the New Zealand Alps appeared of an ashen hue: while as the rays of the sun waxed warmer, the ridges chequered with snowfields every moment stood out in sharper relief. The grey crests reminded me of Norway: while the promontories that dipped into the sea at the foot of



Entrance to Milford Sound (New Zealand).

- the hills called to mind the wood-covered shores of Alaska (North America).... As we approach the coast, the forest-clad promontories shut the ridges behind them out of sight. At this point the ensemble of the scene loses some of its charm: but all the greater is the effect produced as we come within view of the greatest sight of the west coast, — Milford Sound! We sail on beside the green hills. The short trees and bushes that cover the ridges hide the rocks like

thick lawns of an angry green. Between the crests in their brilliant verdure, a gulf a stone's throw wide opens into the home of the cliff giants; the gulf is flanked with verdant hills and steep cliffs that follow each other in quick succession, and as we emerge from the long fjord-like passage into the broad expanse of water into which it opens, beyond the green woods of the valleys, through the



Another view o. Milford Sound (New Zealand).

encircling gigantic mountains that look down upon us like so many Sphinxes, peaks crowned with snow and glaciers meet our view. The picturesqueness of the scene is heightened by two waterfalls 500 feet high. A more perfect, more beautiful panorama is rarely offered by Nature. The echo of Milford Sound is also deserving of mention: here the oft repeated echo of a pistol shot dies away in a rumble of thunder . . .

On the west coast of New Zealand there are several fjord-like gulfs of the kind: and though not one of them is to be compared to Milford Sound, the majority of the passengers would have liked to inspect at least one of the others. Their request might have been granted without danger of delay, as we were some hours in advance of our time: but in these days, when the shipping companies which still enjoy a monopoly of the services to the island, are not afraid of competition, we must not expect any such courtesy. Instead, we wandered up and down before the harbour of Bluff, from dawn till 9, waiting for the rise of the tide to allow us to put off.

CHAPTER IV.

NEW ZEALAND.

Generalia.

New Zealand consists of three main islands and several smaller ones. The three main islands are the North, the South and Stewart Island. The first-named together with the islands attached, covers an area of 44,468, the South Island with the adjacent islands, 58,525, and Stewart Island with its adjacent islands, 665 square miles.

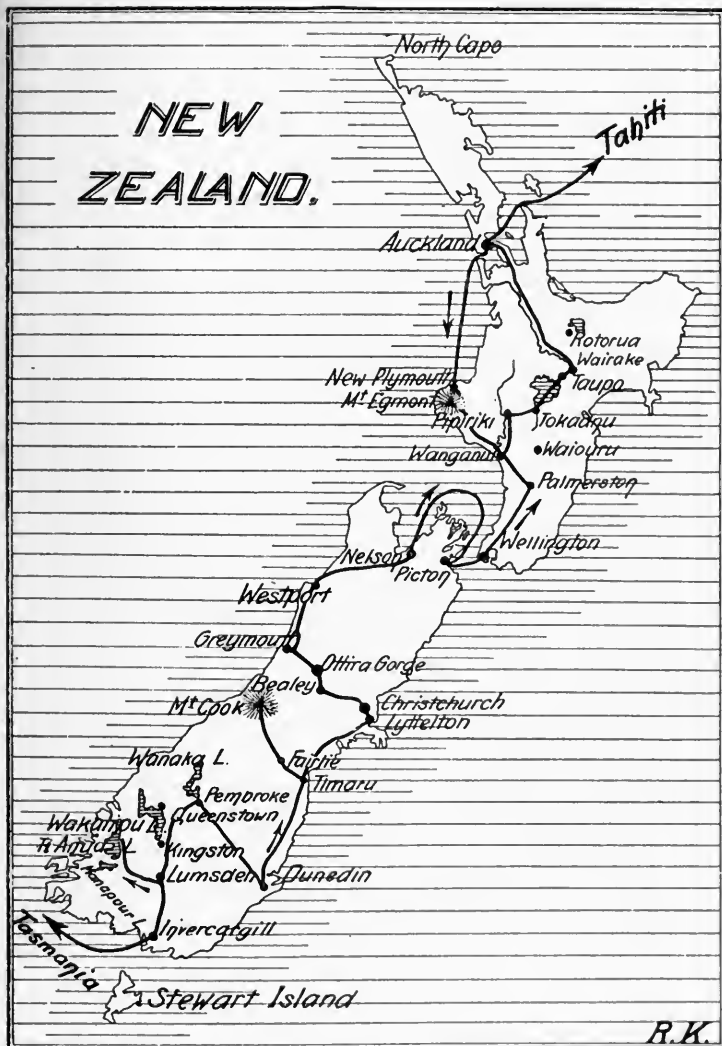
The other islands attached, e. g. the Chatham Islands, the Campbell Islands, the Antipodes, the Bounty, Kermadec and Cook's Islands, together with all the others outside the latter group, cover an aggregate area of 2500 sq. miles. Consequently the whole colony comprises 105,000 sq. miles.

The colony is situated between latitudes 33 and 48. S., and longitudes 166 and 179. E. The North and South Islands are together about 1100 miles in length: while their breadth varies between 46 and 250 miles.

The climate is a temperate one. The Alps of the South Island reach a height of 10,000—12,000 feet, with extensive ice-fields: while the mountains of the North Island, with the exception of a few volcanic hills, vary between 1500—4000 feet in height.

The population amounts to 936,000, of which number 48,000 are natives, i. e. maoris belonging to the Polynesian race. The natives in every respect enjoy the same

NEW ZEALAND.



rights as the British colonists: the two races are indeed on the best terms with each other and often intermarry. In the parliament the brown-skinned natives are represented by four maoris elected by them. In New Zealand the women too have the right to vote: but they cannot be elected members of parliament.

The Englishmen to be found in Australia and Tasmania are more communicative than those of the mother country: but the New Zealand Englishmen surpass both the former in this respect; during the coach-drives the conversation at once becomes lively, the people are most courteous and obliging. As I traversed the island colony, I found acquaintances at every step: but there are limits to their familiarity, which is never made intrusive.

In every town of New Zealand we find a tourist office under the control of the Government, where strangers are readily supplied with every kind of information. The activity of these tourist offices covers practically every field: they control traffic, manage some of the tourist hotels, and provide for particular prominence being given in the official railway maps to those parts of the country where game and trout preserves are to be found.

Both on the railways and in the carriages the amount of free luggage allowed is precisely stated: — on the railways it is 112 pounds a head. As there are no porters except at the large stations, generally everything except small hand luggage is put into the luggage van; for the most part unregistered, as receipts for registered baggage are not issued until a short time before the train starts, and there is no-one to help us to register it. At first I was anxious for the safety of my luggage: but as I found there was no risk at all, later on I entrusted even articles wrapped in rugs to the keeping of the luggage van.

Both the security of property and the conditions of public safety are in general as good as can be desired in

the island colony. The despatch and delivery of parcels is undertaken by the ubiquitous New Zealand Express Company; though it is naturally advisable to be present when the goods are handed over, for, as there are no receipts for luggage, the «express man» has the greatest difficulty in sorting the hundreds of packages. In New Zealand, if anywhere, it is advisable to mark one's luggage in a conspicuous manner, and on each occasion to provide each piece with a new label containing the new address.

Hotel service is defective. Meals are served strictly on the table-d'hôte system. In one respect however, I must give preference to the New Zealand hotels over those of Europe: — even the smallest hotels have their own bath-rooms with hot and cold water: while in the larger hotels there are two or three bath-rooms on each floor, and no extra charge is made for baths.*

From Bluff to Invercargill.

(17 miles.)

On the flat, spongy ground lying between Bluff and Invercargill clumps of hard fibrous grass some two spans high may be seen, with here and there groups of flax weed. In places we get a glimpse of screw pines (*pandanus*) with their hanging roots. In spots higher up we see verdant fields of oats of scanty growth but with full ears. The farms are surrounded with plantations of cyprus-like trees and hedges. The houses are built on the Australian plan, of wood with galvanised iron roofs and terraces.

Invercargill contains 9000 inhabitants: with its broad streets it occupies an area that could be inhabited by thrice the number. On two sides it is surrounded by flower

* The example of Australia and New Zealand in this respect is being followed by the hotels of the southern islands, though in the latter we find cold water baths only.

gardens: the third boundary is supplied by the sport grounds. Within these boundaries stand villas built on the Australian plan, enclosed by thick green hedges of trimmed cyprus trees.

Every afternoon the sport grounds resound with the voices of cricket, lawn-tennis and other players engaged in games with balls on the smooth, green surface of the fields; towards evening the macadam roads are swarming with a long row of bicycles, — most of them carrying ladies. Otherwise everything is quiet: beyond the edifying speeches of the Salvation Army which appears in the evening and the jarring sound of its brass band, nothing disturbs the peace of the broad streets.

Nine months ago Invercargill entered the ranks of the «temperance towns» of South New Zealand: i. e. the retail of liquor in public places is forbidden. Had my attention not been called to the fact by the hotelier, I should probably not have remarked it, for in the bars of the hotels I saw bottles exactly similar to those containing spirituous liquors displayed in the shops: as I found out afterwards, these contain temperance drinks, — e. g. a sweet beer-like liquor made bitter with hops, etc. The arrangement of these bars is quite original: below the shelves containing the bottles stand cupboards divided into several classes; each class has its own key, and here the regular customers keep their own spirituous liquors, which constitute their private property.

From Invercargill to Lumsden.

(50 miles by rail.)

Treatment of horses in New Zealand.

Sheep-pastures and oatfields were followed by a short glimpse of a primeval forest; though, to judge by the smoking trees all round and the destruction of undergrowth, before long all traces of the bush will disappear here too,

its place being taken by pastures and oat-fields, as has already been the case with the fruitful clayey district that succeeds the forest-land.

On the stream that follows after the station of Dipton, 37 miles from Invercargill, several wild ducks were squatting, among them the *casarga variegata*. The female bird of this species has feathers of a changing brown colour; its head is white; its tail is adorned with golden yellow and brown feathers: the male bird is of a blackish hue, with brown feathers near the wings. He is indeed a gallant bird; for he leaves all the glory of a beautiful coat to his mate, while he himself is content with plain clothes! It is a good thing that they are protected by law, which provides for a close season for native birds every third year; otherwise this tame bird, which is already very scarce, would soon disappear altogether. This prohibition is, however, not always respected in more remote spots, as I had occasion later on to see for myself.

The village of Lumsden is the terminus for the stage coach. In the vicinity of the railway station we find three hotels, and between the latter, a few shops and some roomy barn-like stables.*

During the day, some of the horses are to be seen grazing and feeding in the open covered with a thin horse-cloth.

New Zealanders like to keep their cattle covered with cloths, for in their opinion, horses and horned cattle working in this manner lose less heat and consequently consume less fodder: but they supply the animals with an abundance of the latter, and treat them particularly well, especially in the South Island. In the latter island I did not see one ill-conditioned horse at work; while in the North

* These kind of stables, with coach-houses in the middle, are to be found all over New Zealand, in Suva, the capital of the Fiji Islands, as well as in the American colonies, the Hawaii and the Philippine Islands.

Island I never saw one that was driven to death. The horses bred by preference belong to the medium heavy class.

It was with a team of five horses belonging to this class that we started for Lake Te Anau.

From Lumsden to Lake Te Anau.

(52 miles.)

Coaching in New Zealand.

All along the water-washed valleys formed by ancient glaciers stand hills overgrown with yellow underwood: the crests of the old mountains are bare only in places, otherwise time has covered them with fertile soil and formed them in wavy outlines like to sand-banks. In the sunlight, the yellow hills, together with the Alps shining grey in the distance behind them, — to which they form an unusual contrast, — create a most picturesque scene.

Until we reach the first stopping place some 12 miles distant we pass pastures and poor oatfields. The motley groups of scattered farmhouses, with the dark green pine groves beside them, are so many oases in the desert of yellow underwood.

The well-dressed horsemen with their soft, broad-brimmed town hats, Hungarians would not recognise as shepherds, whose calling is betrayed only by the spurs which they prefer to wear on one boot only. There too sheep dogs play an important part in pastoral life.

On the hard road, in the vicinity of the stations, we often meet horsemen slowly cantering: they are farmers or other men living out here in the wilds.

The last quarter of the road leading to Lake Te Anau passes over a gravelly waste. For some distance on the lumps of soil deposited here by the water, we see low brushwood similar to dwarf firs, the so called «manuka» brush: before and beyond, endless gravel, or worthless

clusters of low ferns. The large boulders lying on the gravelly waste must have been formed by the ice period of the southern hemisphere: and there they are to be found almost in a straight line as if marking the track of the glacier.

Driving over the gravelly ground, over streams full of huge boulders, is no pleasant business. And if we add that the passengers are packed by threes into the narrow coaches used on this line, and that progress is slow, we cannot be surprised that comparatively few tourists visit the neighbourhood of the two southernmost lakes (Te Anau and Manapouri). Not to mention the fact that the driver had to leave his seat six times on this road, which is kept up by the State, to open and shut the barriers* used to close the road, and that much time is wasted in the taking up and delivery of letters etc.

The small wooden letterboxes of the several farms are put up on the side of the road.

Lake Te Anau.

Lake Te Anau, like most of the localities known in older times, has preserved its Maori name. Its length from N. to S. is 38 miles; its breadth varies between 1 and 6 miles. Its greatest depth is 900 feet: and it is situated 694 feet above the level of the sea.

On its hilly S. E. banks, the Snodgrass Hotel receives the well-shaken, dusty passengers. The common rooms of the ground floor wooden building are quite adequate for the purpose: the private rooms, with one or two exceptions, are merely alcoves for sleeping in: but everything is clean, as is usually the case in tourist houses managed by

* The right of closing the roads by barriers is enjoyed only by tenants of large estates let by the Government, who are thus saved the expense of having to build fences on either side of the road.

women. Both this hotel, as well as that at the northern end of the lake, are in the control of the State.

On January 31, with four companions, I sailed on the little steamer plying on Lake Te Anau to the northern end.

The steep hills on the western shores are covered by primeval brushwood and forests: while on the eastern shores for some distance there is a stretch of pasture-land, and then on both banks the clear deep waters of the lake are enclosed by hills. On the hillsides that in the distance are of a dark green hue, as we approach nearer, groups of trees of various colours are thrown into prominence, — the most characteristic of which are thick oval shrubs resembling cauliflowers in appearance, and the small-leaved evergreen New Zealand beeches with foliage of a similar kind. Most of the trees are covered with a small, glossy, myrtle-like leaf: larger-leaved trees are but poorly represented. Lower down many species of moss and ferns are growing. Both the mosses, and the shrubs and trees play in colours varying from light to dark green, and from yellow to reddish brown.

The primeval vegetation, in its pomp of varied hues, covers the hills to such an extent that stones are seen greyly peeping forth only in the ravines of more recent date or where crevices have been formed.

As we approach the northern end of the lake, the hills are more lofty. Here and there the line is broken; the ridges stand in a semi-circle, with their backs to the lake, leaving a passage through the hills for a fjord that stretches 10—12 miles . . . Beyond the hills, on the sea side, we saw similar ridges composing a semi-circle, the ridges of just as sharp a formation as here. The same forces of primitive nature must have produced the salt and fresh-water fjords of western New Zealand, and planted in both places the evergreen vegetation . . . The northern part of the lake is enclosed by high Alpine mountains. Here rain-clouds that had descended far down the hills partly

obscured the view: but even then the whole impression produced was superb.

We landed in the northern bay; a good footpath leads from the landing stage to Glade House Hotel. On the way we had a glimpse of the bush that covers the hills of Lake Te Anau. The lower ground is overgrown with glossy, hard-leaved grasses, and ferns (in New Zealand 140 species of ferns may be found), while parasites climb high up the fine tall trees. The bush embraces the ferns, and lives peacefully in the vicinity of the huge trees with their undergrowth of moss and bryony, . . . the song of unknown birds resounds from the dense world of the bush! There is a charm here about grass, tree, and land, a charm that seems to inspire the very air.

Glade House is also a ground floor building with well-furnished, light rooms suitable for a longer stay. The cooking too is good. There is only one great drawback to this charming spot, — the sand fly of the size of a muslin, a little torment that bites without any warning, its bite causing an unpleasant, itching swelling.

The continuation of the road to the hotel leads to a waterfall 19 miles distant some 1900 feet above the level of the sea, and from there to Milford Sound, another 13 miles. Apart from several days' mountaineering and putting up in tourists' refuges, this is said to be one of the most picturesque roads in New Zealand.

From Te Anau Lake to Manapouri Lake.

(12 miles.)

Manapouri Lake.

Here too the carriage road leads over a gravelly waste, then over land overgrown with ferns and flax weed. Where the road is highest we have a splendid view of the western range of mountains. The tree-covered banks of the

river Waian also offer a pleasant relief to the eye in the midst of the desert country.

The Waian is an outlet of Te Anau Lake, flowing into Manapouri Lake to the South: after leaving the S. E. corner of the latter to proceed to the sea, the river keeps its name and is still called the Waian.

We put up at a hotel of the same name on the southern shore of the lake. The present lease of this hotel has only

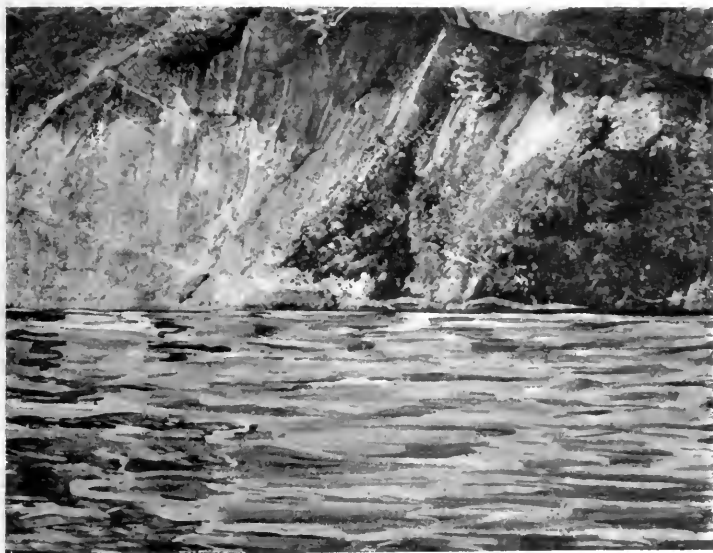


Wrinkled surface of the rocky shores of Manapouri Lake.

a year to run: next year it will probably be put under government control, a fact that will be to the advantage of tourists; for the state of things as regards food while I was there was not such as to satisfy even the most modest pretensions. For four days running we were treated to the same menu, which was so poor that we had to satiate our appetites with bread and butter. Notwithstanding the general dissatisfaction, however, no New Zealander offered

any word of protest. With people so indulgent and forbearing, there is not much chance of an improvement in such an abominable state of things, a fact that is above all damaging to the interests of New Zealand, which relies so much on the visits of tourists.

Manapouri Lake is spherical in shape and covers an area of about 50 square miles, with a depth of 1450 feet. On the south-eastern side the shores are flat: in other



Veined rocks on the shore of Manapouri Lake.

places it is surrounded by steep hills rising to a height of 7000 feet. Its most extensive fjords stretch 8—12 miles into the hills. The whole aspect of this lake is less impressive than that of the narrower Lake Te Anau, but it surpasses the latter in details of scenery.

We sailed round the lake on the little steamer that plies on its waters; entered the fjords; looked into their every nook and cranny; and everywhere found something

worth looking at. The northern shores of the lake are so steep that we were able to sail quite close to the foot of the cliffs: the precipitous rocks, full of fresh fissures, show cross and diagonal cracks of older date as well as wrinkles; while the fissures are in other places filled with a cement-like material, wearing the appearance of skeletons on the darker background of the original material.



Among the islands on Manapouri Lake.

On the surface of the rocks which has started to crumble, a coating of moss 2—3 inches thick has settled; while those spots which are already in an advanced state of crumbling have been covered with bush and finely formed small-leaved trees. In the places washed with water we can remark how little vegetable mould the plants require: the tree-roots stretch like so many plates in the fertile soil that has attained a thickness of a few inches on the surface of the stone.

Manapouri Lake is quite adjacent to Te Anau Lake: yet there is a certain difference in the vegetation, — e. g. the shrubs and trees formed like cauliflowers are comparatively rarer here than in the neighbourhood of Te Anau Lake, though the vegetation is just as varied in point of colour.

The majority of the thirty islands scattered over the surface of the lake are overgrown with thick woods: and these islands remind one of the island world of Finland. Where an island lying near the shore meets a long promontory stretching far into the water, we have a small subsidiary lake, with a family of paradise ducks peacefully sitting on its tranquil surface.

The ridges enclosing the fjords contain valleys at some height, formed by descending streams: the brooks that leap down from the valleys either descend straight down the surface of the rocks, disappear among the foliage, or appear at the foot of the hill in the form of white foam.

The most charming spot on the lake is the cave in the south fjord, into which the steamer enters: its walls are overgrown with moss and ferns, its half-open roof is shaded by densely foliaged trees, and in its interior, half hidden by a projecting rock, a waterfall thunders down, turning to dew as it leaps over the boulders. A cave that is a glimpse of fairy-land!

From Manapouri to Queenstown.

(117 miles.)

A few words about the Labour Question.

On the way from Manapouri to Lumsden, I again had the pleasure of being packed into a coach. During the long drive I had a conversation with my neighbour. He had come to New Zealand as a small child, with his

parents: and as a young man had taken to gold mining. At that time gold was still found on the surface in New Zealand. His fortune had varied; but he had collected a handsome sum which he lost in speculation and then earned again. For five years he had been engaged in working up New Zealand flax weed; the object of his journey in this district had been to buy up the wild flax growing on the land of the proprietors and tenants who had estates there. He spoke favourably of its excellent quality. Formerly it had been used for making ropes only: but the flax growing here was now used for making a textile fabric that could vie with linen.

After a discussion of gold mining and the working up of flax into manufactured article, we turned to the labour question. Enterprise is difficult in New Zealand, he said, owing to the high rate of wages.

A discussion of the question of wages is quite the fashion, both in New Zealand and Australia, particularly among farmers. They seem to have overshot the mark by encouraging emigration, leaving thereby extremely wide discretionary powers in the hands of small men. Had life begun with the ordinary economic apparatus, not with the search for gold, things would scarcely have reached this pitch. Gold-diggers who trusted their good fortune, lived on bread and water, and hoped, and searched, and gambled! . . . The spirit of gambling took such complete hold of them, that they refused to undertake any other permanent work which promised a safe subsistence, except for exorbitant wages. So far there would be no harm done. But as they have secured absolute liberty, not only in settling their own fates but in the regulation of social order too, they are not satisfied with the extravagant rise in wages obtained. They are always demanding more; while their work is continually decreasing in quantity, and is even superficial and bad: they abuse their rights, as every good-for-nothing does, if he can take steps to defend his

own interests. What will be the end of it all, in the home of liberty, where, even in case of extremity, there is no armed force, at the disposal of prudent and energetic men, for the protection of public order and public interests, can easily be imagined: it must end, sooner or later, in an economic crisis and later on in a social upheaval.

It is true, this is no question for a diary: but it is so much a part and parcel of the very atmosphere of Australia, that I could not pass over it in silence even in this brief journal-like description of mine.

From Lumsden we went 37 miles N. by train to Kingston, in the southern bay of Lake Wakatipu, where we took the steamer and sailed over to the town of Queenstown on the eastern shore of the lake.

The eastern and western shores of Lake Wakatipu are flanked by ranges of hills: the ridges covered with yellow underwood are broken on the crests and look like floes of ice. The height of the hills is in proportion to the breadth of the lake: consequently the impression of the whole is very effective.

In the neighbourhood of Lake Wakatipu.

Difference of social conceptions from those in vogue in Europe.

The many-coloured houses of Queenstown, the promenade on the shore of the lake, the park-peninsula in the vicinity and the storm-beaten, grey Mount Remarkable that forms the background produce a deep impression on all new arrivals. In the harbour three steamers are at the disposal of tourists. After the wretched hotel life at Manapouri, I was agreeably impressed as I entered the Eichard Hotel, built of stone, that stands on the shore of the lake: I should not be obliged to listen every night to the snoring of my three neighbours who had been shaken to pieces in

the coach, as I had been in the wooden buildings of the two previous stopping places; and if necessary, I could have wine or some other liquor, and should not be compelled to confine myself to water as I had been in Manapouri, where the retail of liquor is prohibited.

After supper (dinner) I strolled over to the park peninsula: even if we confine our visit to the neighbourhood of Lake Wakatipu to this one spot, we shall not regret



Near Queenstown, on the shores of Lake Wakatipu.

having done so, as there is no other place in the vicinity more charming, with a finer situation or offering greater comfort. Notwithstanding, next day I took the boat to the head of the lake situated on the west of the island, at a distance of 30 miles.

After Queenstown, Lake Wakatipu branches off to the West, while its second long branch bends northwards. The formation of the mountains is practically the same as

in the eastern branch; only in the ravines recently planted woods darkle, though elsewhere everything has been burned down to give way to pastures.

Before we come to the upper end of the lake, we pass three islands. Over the hills that enclose the head of the lake, the distant glaciers of Mount Earnslaw loom down upon us.

From Glenorch on the northern shore, many excursions can be made: but as I was well established at Queenstown, I resolved not to change my headquarters. From there I made one more excursion, on the Skipper's Way leading among the hills. At first this road ascends gradually in the valley: from a bridge two miles distant we caught a glimpse of a brook flowing in the gorge stretching below us; in the side of the hill is a waterpipe laid when gold was found in plenty, and used today in one gold washing establishment in a more distant valley. The road, partly cut, partly made by blasting the sides of the slate-stone hills, in many places winds over steep precipices: in dry weather it is very dusty, but the dust is easily shaken off, as it contains little clayey matter.

On the side of the hills where blasting has been carried out, white quartz-like stripes peep from among the layers of slate-stone: but owing to the small proportion of gold it contained, all attempts to bore had to be given up.

I had dinner in a wayside hotel. I was taken into the sitting-room, to wait until the table d'hôte was served. I told the hostess to give my driver some food, and then began to peruse the visitor's book. In a short time the hostess came to announce dinner. At one end of the table an elderly long-bearded man of farmerlike appearance was sitting: my driver took his seat beside him and, as one who feels quite at home, set to work to eat — modestly, but with due dignity! . . . I was at a loss what to do? . . . I must either eat the table d'hôte or go without

dinner, for in the South Island my lady of the kitchen was not likely to prepare two meals, and the waitress was also not inclined to depart from the usual arrangements. As I always respect women's views, I remained where I was, and took the only feasible point of view.

The driver, like all the white men of Australia and New Zealand, was apparently a well-read man, and had acquired sufficient propriety to make his presence at the table tolerable. He used both knife and fork in an unexceptionable manner, and I could find no fault at all with his behaviour.*

On the way back I intended to shoot rabbits. The noxious little four footed creatures have made holes all over the grassy parts of the hillsides. After having shot three of them, I gave up firing at the small animals, which were either moving slowly up the hill or sitting stil. Besides rabbits, I saw a few Californian tufted quails, a very large flock of starlings, and some kites. The latter are protected, as they make havoc of the rabbits.

On the way home, a superb view was offered by Queenstown lying at the foot of the hill, and by Lake Wakatipu.

From Queenstown to Pembroke.

(42 miles.)

Country cuisine in New Zealand.

Between Queenstown and the village of Pembroke, which is situated to the N., comfortable, broad coaches are run. In level country these large vehicles would be most practical: but on this road, which rises to a height

* I had already on two occasions been obliged to sit down at the same table with a coach-driver in small tourist-frequented spots of a similar description: so it is evidently quite a customary thing here, a fact that I mention as characteristic of the local social conditions.

of 5000 feet, they are too heavy. We were on the road from 8 a. m. till 7.30. p. m., in choking dust: and we only stopped twice for a very short time.

Until we reached the first stopping-place, in the valleys stretching beneath us we saw wheat, barley, and oat fields. The crops of beardless wheat were for the most part cut down. In order to keep the rabbits out, in this district the fences separating the various estates are provided with barbed wire to a height of about 2 feet. Around the cane-brakes of Lake Hayes, which we passed on the way, there were numerous flocks of wild ducks.

At the southern station, the inn was surrounded by a number of idlers. In the valley hard by goldwashing is still carried on: — here we have a glimpse of the life of the miners staking their all for gold!

In the afternoon we passed through hills covered with scorched pastures, to Pembroke; the promontories to the left are gravelly formations, while here and there before the hills on the right stands out a gravel mound that has all the appearance of an embankment. On both sides of the stream flowing along the valley lie washed-out piles of gravel thrown on one side by the gold-washers. On the huge boulders at the side of the road, texts from Bible have been painted, — the work of the Salvation Army!

Emerging from the valley, over pasture-land teeming with rabbit warrens, we reached the southern end of Lake Wanaka. Here lies the village of Pembroke with its 200 inhabitants.

Pembroke is the headquarters for visitors to Lake Wanaka and its environs. The first hotel is owned by two sisters: and here, of all the country stations in the South Island, we felt most at home. From dawn till late at night the owners are astir: and the good example set by them is not without its effect upon the staff of servants. We imagine ourselves to be in Europe, where excellent board is always to be had for money. The cuisine is good; there is plenty of food, and variety of menu. The last characteristic

is practically unknown in the kitchens of the South Island: the warm dishes, at all times and in all places, are confined to the same unvaried items, — a kind of weak broth, mutton or roast beef, puddings, eggs and bacon!

The neighbourhood of Lake Wanaka.

Lake Wanaka is situated 930 feet above the level of the sea, and its deepest part is 155 feet below that level: it is 30 miles long, and 3 miles broad. At the eastern end, towards Pembroke, its shores become flat: the two shores of the arm stretching westwards from this point are formed by a chain of shapeless hills used as pastures for sheep. The western range opposite Pembroke, — as in the case of the other lakes —, is lofty, and partly covered with snow. The best complete view is to be had from the southern half of the lake, by taking as foreground the large sheep station on the shore consisting of several buildings.

Of the excursions by steamer on the lake, that to the Manuka or Pigeon Island is the most gratifying. Starting from Pembroke, we pass two islands: and then the boat puts in at a third, — the Manuka Island. A well-kept path leads up over ground overgrown with grass, ferns, and shrubs: here and there among the green trees we see dead eucalyptuses,* which were killed some years ago by extreme cold; gooseberries are also to be found on the island, and are at this season full of ripe, perfumed fruit.

By the gradually rising path, in half an hour we reach the little lake (tarn) lying at a height of 300 feet. The tarn with its water clear as crystal is probably connected with the tall hills in the distance, which feed it. Its shores are covered with shrubs and trees. From the steep cliffs on the shores of the lake we get a superb view of the pretty little sheet of water with its verdant environs and of the glassy surface of the Wanaka which stretches beneath it.

* These trees were brought from Australia to New Zealand.

On a peninsula, the continuation of a valley opening on to the western shore of Lake Wanaka, we find another tarn at a similar altitude, the banks of which are overgrown with reeds. It is enclosed by high cliffs. The terrace-like formation of the surfaces of the two lakes is consequently not particularly conspicuous. A carriage road leads from Pembroke to the second little lake. This road offers plenty of variety, particularly to sportsmen: just after leaving



Tarn on Manuka Island.

the large sheep station, we meet with a stretch of inland water covered with reeds, full of water-fowl, for the most part ducks and pukaki hens (*porphyria melanotus*)*. The latter are very inclined to wander into the fields in search of

* This «pukaki» hen is larger than the coot: its dark feathers take on a bluish hue on the breast, neck, and head; its beak and long legs are red; on the front of its head is a leather-like red ornamentation similar to that on the forehead of the coot.

grass, and allow one to get quite close to them. There are two more fens where we can get a glimpse of pukaki hens running into the reeds or flying about in an awkward manner: and by this time we are quite close to the western shores.

The hills loom larger and larger: then in the distance, the peak of Mount Aspiring, 9960 feet high, rises into prominence, with a twofold glacier valley beneath it. For some way, the road winds parallel to the western shore. In a small creek we discovered a pair of wild black swans, which at our approach swam farther out, — the water is their home. Next we pass through a defile thickly overgrown with ferns, into a broader valley with good pastures. In the house of the farmer who owns or leases most of the valley, we met with a right royal welcome. He did not stand on ceremony: at dinner he himself carved the joint, while his wife helped to wait upon the guests, as is the general custom in New Zealand, where there is a scarcity of domestic servants, whose wages average ten shillings a week.*

The vicinity of Lake Havea. Mania for horse-racing in New Zealand.

A carriage road 12 m. long leads from Pembroke to Lake Havea. Near the village we come to an enclosed race-course: — for even a parish of 200 souls cannot be outstripped by the towns of New Zealand!**

* Everywhere in the world humane men are inclined to sympathise with servants: but in New Zealand we are driven to feel a kind of pity for the plutocracy. With the conditions of wages so burdensome, and servants so idle, their existence is a constant struggle to keep what they have got. They are practically the only people who do any hard and good work.

** Horse-racing is quite as highly developed in New Zealand as in Australia. Every town has its own race-course, with a fine stretch of turf and a grand-stand. As a result of the mania for horse-racing, a mania for betting has spread everywhere: e. g. during a drive, my driver stopped, because a navvy asked him which horse had won the Grand Prix of Melbourne, on which he had a bet. Part of the high wages find their way to the bookmakers.

On the large rocks at the side of the road we can read Bible texts.

Passengers are carried over the river Clutha, the outlet of the Wanaka and Hawea lakes, by a ferry. Continuing our journey on the farther bank, opposite the opening of Lake Hawea, we soon reached the latter. On the north-western shores we saw lofty Alps: the ranges of hills on the eastern and western shores are unshapely.

Lake Hawea is situated 1064 feet above the level of the sea: its greatest depth is 355 feet below that level. On the slopes of the barren hills of Lake Hawea, with their thin overgrowth of brushwood, the stags imported from Europe have propagated, and possess fine antlers. And both lakes (Hawea and Wanaka) teem with trout imported from England: but, as the lakes supply plenty of food, fishing is not particularly successful.

The so-called Plain of Hawea, to the south of the lake, is a very fertile district.

Owing to the excessive number of rabbits, the several estates here are not only enclosed by the prescribed fences: but there is barbed wire to a height of $1\frac{1}{2}$ —2 feet, to prevent the rabbits from getting in from outside. And those that have remained within the fences are destroyed unmercifully, in winter by poison, in summer by traps and by shooting them. The corpses of the rabbits thus destroyed, after being skinned, are hung on the fences, as a sign that the requirements of the law have been complied with.

From Pembroke to Alexandra, viâ Cromwell.

(57 miles.)

The educational system of New Zealand.

I started a little after 4. a. m. from Pembroke, in a carriage I had specially engaged, in order to be in Alexandra the same evening. The old driver whose fare I had been on the previous day, sleepily and reluctantly harnessed the

horses, while the servants were sleeping the sleep of the just (4. a. m. is too early even for the good folk of Pembroke!): only the honest landlady was astir, and in excellent humour. She herself helped to put the horses in at this unusual hour.

Anyone who wishes to form an idea of the enormous numbers of rabbits in this neighbourhood, which run about in fives and tens, must go out early in the morning: they are as great a plague as rats. Besides poisoning and using traps, the good New Zealanders have discovered that ferrets must be protected, — in fact they are said to let ferrets loose on their fields. This circumstance must be very annoying to poultry breeders, yet the future of poultry breeding should be a very good one here with the cheap, hitherto practically unused pasturelands.

On my way through this district, my attention was particularly riveted by the schools to be found in the vicinity of the farms. Here I may mention the fact that every locality containing at least 10 children due to attend school has its own school, maintained by the State. In any parish with at least 6, or less than 10 such children, a school is opened by the State with the assistance of the parents.

To judge by the fowling-piece and fishing implements hanging on the wall of the dining-room of the station where we had breakfast, I supposed the owner to be a sportsman. I was not mistaken: he was in fact an enthusiastic angler, and no enemy to a gun, and at once produced a number of artificial flies used for catching salmon. «This one is liked at such a season», he said, «and this other one at such a season, by the trout living in the Clutha.» His discourse would no doubt have interested an angler but I myself known very little about the «gentle art». One evening a few days previously he had caught 19 large fish (each weighing from 6—8 pounds): but since then he had been down on his luck.

At the same station my attention was attracted by a carriage closed on all sides — or rather by the two

powerful horses harnessed to the carriage. The same was the travelling shop for the supply of the countryside; it contained everything, from haberdashery upwards, of which a country household stands in need.

Round the large sheep station that succeeded the place where we had breakfast, a large number of sea-gulls were feasting on the corpses of rabbits: I saw the same sight later on in several places. The birds croaked



A travelling store. (New Zealand S.)

and cawed with a noise similar to that to heard in Norway round the corpses of whales.

Until you reach Cromwell, the hills present a monotonous appearance: those on the left bank of the Clutha before the town of Cromwell are covered with a reddish-brown deposit, while on the red crumbling slopes dark rocks start into prominence.

Near Cromwell, the carriage road suddenly opens

on to a sand desert: the quicksands are kept together by large knots of brushwood.

At Cromwell, the Clutha, — which drains Lakes Wanaka and Hawea —, with its transparent green water, unites with the overflow of Lake Wakatipu, and still keeps its name. In the neighbourhood of Cromwell, and near the town of Alexandra, the gravelly bed of this river is dredged by a number of gold-washing boats.



Gold-washing Dredger near the town of Cromwell.

Between the two towns (Cromwell and Alexandra), the Clutha for some distance flows between steep hills: and the road cut in the hillsides passes boulders the size of houses, that have rolled down from above. On the rocks the Salvation Army here too has in many places painted texts from the Bible. On the less steep slopes the crumbled stone layers are of a reddish-brown hue.

Before Alexandra the hills lose in height: and finally, as at Cromwell, we come out on a sand desert kept together by clumps of brushwood.

From Alexandra to Dunedin.

(137 miles.)

Afternoon tea. Bad teeth of the white inhabitants of the Island. Dunedin, Sunday afternoon holiday. Guild-like organisation of the business world.

The railway journey along the banks of the stream, from Alexandra to Dunedin, offers plenty of variety with its gradients, its windings, its iron bridges and the scenery through which we pass.

The flat country by the side of the road is for some distance covered with enormous blocks of stone, which probably came here in the wake of glaciers!

The enormous hold afternoon tea as an institution has taken of Australians, was most conspicuous at the station where we stopped at 4. p. m. Two and a half hours before we had dined, and in two hours we were to have supper in Dunedin: yet no-one would for the world have missed the afternoon tea served in a wooden shanty.*

* Besides tea, nowhere is so much jam consumed as in New Zealand and Australia. At every meal we find on the table orange marmalade, raspberry or other jam, which, with the good fresh butter supplied in addition, is almost enough for most people. This fact must be partly the cause why bad teeth are general in New Zealand, so general in fact, that we may safely say that anyone with an unexceptionable row of teeth is not a native of New Zealand. This is not the case with adults only. Younger people as well wear false teeth, most of them in fact badly made ones, a circumstance that renders them still more conspicuous. At first, when I saw well-built girls with bad or false teeth, the sight depressed me: later on, however, I got accustomed to it. New Zealand drinking water contains very little lime; and this is said also to further the decay of teeth, — though the statement cannot be accepted

The town of Dunedin is situated in a bay 17 miles long: with its outskirts it contains 57,000 inhabitants. It was raining when I arrived; rained all the time I was there; and was raining when I left: — and yet a Dunedin barber actually greeted me with an «isn't the weather good?» As this year there had been a drought in the neighbourhood of the town, rain was badly wanted and was received with delight, — locally. But it was no pleasure to us travellers, especially on a Sunday!

Towards evening, before paying a call, I whiled away the time at home reading; then left the hotel to take a carriage, — but none is to be found in Dunedin on a Sunday, for on this day everybody is having a holiday, everybody goes on foot or uses some self-driven vehicle. Travellers like myself, who would like to appear in the drawing-room in proper guise, are obliged to wade up to their ankles in mud to keep their appointments.

In the rainy weather, having nothing better to do, I made a few purchases among other things some mild cigarettes: for in the country you either get no cigars at all, or in restaurants at half a shilling a piece, rather a tall price for a cheap smoke.

The tobacco-shops are generally managed by barbers, who use the street side of their establishments for the sale of multifarious cigars, cigarettes, cigar-holders, knives, scissors etc.: but even here I could not get any cigar worth the smoking for less than threepence.*

unquestioningly, as the Maori inhabitants possess excellent teeth, although they drink the same water. For my own part, I am more inclined to attribute the decay of teeth to indulgence in sweet things: in fact to a certain extent, the degeneration of the race as well? The medical world is studying the question, and may perhaps succeed in some degree in stopping the evil.

* Spirituous liquors and cigars are the most expensive articles of consumption in New Zealand. Even in the smallest inn we cannot get a glass of liquor or beer for less than six pence (the same is the case on the islands of the Pacific Ocean): while the lowest price for a cigar in

I had only half-an hour of sunlight in Dunedin, which I took advantage of to venture on the steep cable railway in the High Street: below me I saw a fjord-like bay, rows of houses of many colours, and on a hill close by the bush district protected by the Government. All this must render Dunedin a very pleasant place to live in, — on weekdays, and when the Dunedin rain is not pouring down in torrents.

From Dunedin to Fairlie viâ Timaru.

(170 miles by rail.)

From Fairlie to the Cook Mountains by motor.

(96 miles.)

Sense of responsibility of New Zealand workmen.

Starting from Dunedin by the railway that passes along the hill side next the bay, we see to the left mountains overgrown with bush, to the right watering places. After numerous bold curves and tunnels, the line for 18 miles traverses a cultivated district in the immediate neighbourhood of the open sea. At Timaru, 131 miles from Dunedin, we have to wait an hour or two for the local train to Fairlie, — just enough time to have a look round. Timaru

a restaurant also averages sixpence. In other respects, anyone who adopts the customs of the colony can make his money go a long way: only, the smallest extra luxury must be excessively paid for. One of the peculiarities of the colony is that those engaged in the various industries have an organisation almost similar to that of the older «master system». The result of this organisation is that, if an article is spoiled, they make you pay a full price for it: for the sum demanded for repairs is so high that it is not worth paying. Very often we see that in the case of a house in perfectly sound condition, some small repairs are put off until that part of the house becomes so dilapidated that it must be replaced by a new one. As for luxuries, the prices demanded are absolutely exorbitant, e. g. at Queenstown for pressing a suit, I paid seven shillings: and when I took exception to the price, I was told that that was the price agreed upon by the master tailors.

is one of the staples of New Zealand commerce. Near the town there are two refrigerating houses: in the folds in the vicinity flocks of sheep may be seen, to the number of thousands — quite recently 12,000 frozen sheep were sent as meat to the London market.

Until we reach Fairlie we also see nothing but pastures and ploughed fields. This town is the starting point of the



Coach and motor station beside Lake Tekapo.

motor road leading to the Cook Glacier. We put up at the hotel opposite the railway station. After dressing, we sat down to dinner, and after dinner conversed in the hall.

Whether due to the more modern and quicker communication or to any other reason, — this little station has more in common with a European inn than a New Zealand one. I saw many who had drunk more than was good for them, — a state of things in vogue in the towns of New

Zealand too: but the tone of conversation here was far louder than the quiet English behaviour I had been accustomed to in this country.

We left Fairlie at 8. a. m. on February 19, by motor. The rain of the previous day had laid the dust on the road: the only thing wanted to make our enjoyment complete, was sunny weather. Passing among fields scorched yellow by the sun, we arrived at Lake Tekapo, 24 miles from



On the way to the Cook Glacier.

Fairlie. This lake, 15 miles long and 3 miles broad, is situated 2437 feet above the level of the sea. In the sunlight which peeped through white clouds, the glassy surface of the lake was of the greenish colour of a turquoise. In the small hotel beside the outlet of the lake, we had a cup of good tea, and then continued our journey.

This motor journey is a severe trial for the chauffeur: uphill and downhill, quick bends round the hillsides, sudden

application of the brakes when crossing streams, rattling over brooks, — it all requires constant attention on the part of a chauffeur. In some places red wooden bridges span the brooks, bridges built by the Cook Motor Company to prevent any break in the traffic during the heavy rain-falls. The bridges are so narrow that the motor has only just room to pass: consequently large vans and carts drawn by 8—10 horses cannot use them, — and therefore do not ruin them. But he must be a clever chaffeur who crosses them at any speed: our driver was wise enough not to attempt once to dash across.

Thirty miles further on we reached Lake Pukaki, journeying on 4 miles along the southern shore. The banks are covered with boulders brought there by glaciers. Travelling at high speed among these boulders on the shores of the opal-coloured lake is a delight both to sportsmen and to lovers of nature. Lake Pukaki is 12 miles long, 4 miles broad, and is situate 1700 feet above the level of the sea.

We had dinner in the hotel at the southern outlet of the lake. This agreeable hotel, with its excellent rooms, is controlled by the State.

After dinner (lunch) we continued our journey northwards on the western shore of the lake, then along a broad valley overgrown with sedge and abounding in meadows, which forms the continuation of the lake.

In a shallow overflow at the northern end of the lake black swans were swimming, in the water standing in the northern valley we saw ducks, while on the grassy spots the heads of pukaki hens (*porphyria melanotos*) were bobbing up and down.

In the meantime, to the N. W., the clouds were approaching nearer to the earth, covering the Alpine summits; and at last the rain descended upon us. After another 4 hours by motor, we reached the coaching station consisting of two wooden houses. Here, in the coachdriver's room, hung with waterproof coats, Wellingtons and other

inevitables, the usual afternoon tea was served ; then, with due slowness our luggage was transferred to a «passenger squeezer», four horses were put in, and in this vehicle we traversed the remaining 16 miles to the Hermitage Hotel, in pouring rain, over rushing streams.

The chauffeur accompanied us, leaving his motor out in the pelting rain, after having covered it up, in a way, by throwing a sheet over the back seat, — that too only when he was told to do so. The worthy individual must have argued in himself somewhat as follows: — «from 8. a. m. to 4. p. m. is eight hours; I only do eight hours' work, for that is the legal time in N. Z.; so now I have the right to rest! . . .» That the rain might damage the motor was an idea that did not occur to the New Zealand employé. — during his leisure hours. Here the conscience of employés is deficient.*

The vicinity of the Cook Mountains.

We were wet through and quite starved when we arrived at the Hermitage Hotel. An elderly woman came to meet us, in silence and with a disagreeable mien. She was the employe of the State, -- in charge of the hotel. If I had not declared decidedly that I should return by the earliest carriage, she would have put me in the common room,

* I have often debated in myself the question what kind of character and education were required in a people in order to be able to realise the idea of the most absolute equality imaginable. I could not even conceive a better man than the masses of New Zealand, well read, sober-minded, who never touch the property of others; — and yet what use they make of their liberty? They absolutely abuse it. A sad example of the results of the exaggeration of the principle of equality of rights.

However, one thing the island colony certainly teaches us, — the basis of public safety is the general well-being of the whole community: — a statement that can of course be applied in general only to such a well chosen mass of men as the emigrants from the mother country living in this colony.

though there were plenty of private rooms empty. I saw the same thing over and over again in the Hotels managed by the State. Until the State employes in charge of the hotels are given a share of the interest, there will be a continual repetition of such mistakes and errors arising from megalomania and indifference. But it is to be hoped that the interference of the Tourist Society, which is having its



The Cook Glacier.

effect everywhere, will here too result in the introduction of a sound new system.

The rain lasted all night; the howling of the wind was at times accompanied by a thunderlike rumble, caused by blocks of ice dashing down from the Müller Glacier hard by.

The next morning I awoke to the sound of peeping: looking out of the window, I saw six greenish grey parrots

of a large kind hovering round the house. They had probably come at the call of three mates confined in cages in the courtyard of the hotel: and the cold, windy weather had also helped to drive them from their usual resort in the hills. These Kea (*Nestor notabilis*) birds are supposed to peck out the sides of live sheep and devour their livers. For this reason they are not protected by law.

On February 21, we awoke to find a cloudless sky



The morena of the Müller glacier.

and clear weather: such weather must be made the most of in a district where there are glaciers, so I got up early and climbed up the hill behind the hotel formed by palaeozoic glaciers, — the so-called «look-out». It does justice to its name, for it offers a magnificent prospect! The ice-falls of the Müller Mountains scarce three miles distant, stood out in bluish hue against the snowy sides of the Alps, while further north the peak of the Cook Mountains, 12,349 feet

high, glistened white on the horizon. On the previous day snow had fallen on the summits of the hills, a fact that only added to the beauty of the glacier region.

The glory of the Müller Glacier are two walls of ice of a thickness of from 170—180 feet, that stretch one above the other on the side of the hill. From time to time huge blocks of ice fall off these walls and dash down in the form of white dust. From the main mass an enormous ice field (morena), several hundred feet high, stretches down into the broad valley.*

Opposite the Hooker brook which flows past the ice-fields of the Müller Glacier from above, I wandered four miles down the valley that turns northwards. At the bend of the ice-fields of the Müller Mountain, beyond a green flat expanse ornamented with white flowers, we come across the ridge of the ice-field that descends from the North, from the Cook Mountains.

Enormous boulders are lying about near the foot of the ice-covered hill. The sides of the ridge opposite the Alps are deep red in hue, with an admixture of rosy tints. Considering that the broken surface of stones is generally of a dark grey colour, the red hue is due to the surface of the stone being in process of crumbling. The streams trickling down the sides of the hills bring rolling stones with them in their course.

From the Cook Mountains to Timaru by motor.

(135 miles.)

From Timaru to Christchurch by rail.

(100 miles.)

On the 22nd, in the morning, we started back from the «Hermitage». About an hour later, my eyes fell upon the ice-field (Tasman Glacier) of the neighbouring valley

* The New Zealand glaciers are characterised by large quantities of broken stones, a fact explained by the fragile nature of the stone layers of the hills.

that runs parallel to the Hotel. This ice-field occupies a broad valley, and is said to carry on its back more stones than any other glaciers.

At a station 16 miles from the «Hermitage» we entered a motor-car. Near the road past the Pukaki Lake the machine suddenly stopped: and we had nothing left but to walk the remaining 7 miles to the next station.

A carrier pigeon was at once despatched to Fairlie to inform the Motor Company and to ask them to send a car; yet we could not start till next evening. All Friday evening must have been spent in deliberations, and finally they came to the conclusion that, as we could not arrive in Fairlie in time to catch the early Saturday train, we could wait, as there were no Sunday trains. At last the motor car arrived; and with three fellowpassengers I drove to Timaru. There everyone went his own way by train.

On its arrival at Timaru, the Dunedin-Christchurch express was almost full. Many passengers got in at Timaru too. I wished they had not coupled on a dining-car! We dined in two instalments; scarcely was the second lot ready, when tea began, and the crowding started again. On the trains in Australia and New Zealand, papers and books are sold while the train is in motion: and the vendors only added to the bustle and confusion. The moral is, — corridor carriages with passages in the middle are not suitable for lines where the traffic is heavy: and if there is a dining-car on the train, one thing is certain — «*Probatum est intra Timaru et Christchurch*».

The line from Timaru to Christchurch traverses a plain stretching N. E. for 112 miles, from the western hills to the east coast.

This plain — Canterbury Plain — is the most fertile and best cultivated land in the island colony. Instead of sheep pastures 1000 acres in extent, enclosed with wire fencing, we see here farms surrounded by green hedges. To eyes accustomed to the barren parched pasture-lands

of South New Zealand, this more thickly inhabited country is a pleasant change.

The Refrigerating Station at Belfast for exported meat. The workmen strike.

About 8—9 miles before Christchurch, as at Timaru, large flocks of sheep are browsing beside the railway line. Here, in the village of Belfast, is the largest refrigerating station of the South Island, the so-called «Canterbury Frozen Meat and Dairy Export Comp. Limited». The equipment of the station is remarkably complete.

Some of the machines are driven by electric power: yet, side by side with the new plant, we find the old boilers and other unused parts of machinery. When the official in charge called my attention to the first boiler of this description which has been thrown into disuse, I thought it was a kind of pious act to preserve articles reminiscent of earlier days: — but it is nothing of the kind. Labour is still dear, so everything must stay where and how it was, there is no hurry about clearing the things away. Such are the aesthetic principles of the shambles.

The export of meat is one of the most important branches of New Zealand trade. In the Belfast establishment, the employes are paid twenty shillings for every hundred sheep slaughtered, flayed and cleaned, — very high wages, as the best workmen on an average can account for 80—90 animals each a day: and even the average workman can account for from 40 to 50 animals a day. But in the eyes of New Zealand workmen, wages are never high enough: quite recently, by mutual agreement, the employes of several factories went out on strike.

In cases of dispute between employer and employed, in New Zealand, according to the provisions of the law, the decision rests with an arbitration court composed of delegates from both sides, — an arbiter, an employer and

a workman. The story of this strike was as follows: the strikers paid no heed to the provisions of the law and did not take their case before an arbitration court, but simply sprang the strike on the employers as a surprise. This was the first time such a thing had happened since the above-mentioned law had been passed. The well-to-do workmen idled away their time at home: and the reporters of the various newspapers wrote whole columns on the views entertained on the situation by the several workmen. Most of them were of opinion that, being free men, they could take a holiday when they liked, and would remain idle until their demands for 25 shillings for every 100 sheep had been complied with. Meanwhile the factories with all their enormous investments are unable to fulfil the contracts they have engaged in: and the sheep-farmers will have the animals left on their hands.

Christchurch. Maori-Collections in the Museum. The Exhibition.

The Maoris, the aboriginal inhabitants of New Zealand.

Christchurch, with its 57,000 inhabitants, is built on a plain, with Mount Lyttelton (1600 ft. high) to the South. Anyone standing on the telescope tower of the Express Company or that of the Exhibition, sees the rows of houses of the outskirts peeping forth from gardens. The botanical gardens, with their area of 80 acres, cannot vie with those in Australia.

Of the collections in the Museum, that of stuffed birds deserves mention: and the collection of skeletons of the extinct moa birds is quite first class in its kind. The second interesting feature of the Museum is the Maori dwelling-house: with its woodcarvings, it was made by Maori master-workmen as far back as 1842. The carved figures placed in a row in the house — which is entirely of wood-

represent the several brave chieftains. The hands of the warriors, which are clasped over their stomachs, each have 3 fingers: some of the warriors' tongues are hanging out of their mouths. Hereby the Maori master-workman have immortalised an ancient Maori custom, — in battle they made mouths at the enemy, thrusting out their tongues!

At Invercargill, a town in the south of the island, situated on a small plain, I was struck by the large number of bicyclists: at Christchurch which likewise is situated on flat ground, this phenomenon was even more striking. Early in the morning workmen arrive on bicycles, later on men and women clerks; of an afternoon excursionists may be seen on the wheel; of an evening hundreds of visitors returning from the exhibition practically illuminate the streets with their bicycle lamps: but no-where have I seen so many bicyclists, as at a cricket match. Here they were literally «in heaps». In New Zealand, where pilfering is a practically unknown idea, everybody is sure to find his own machine: if any attempt were made to do as they do here in good old Europe, many a bicycle owner would have to trudge home on foot.*

As for the exhibition, many of the passengers had told me that it was a failure, and was not to be compared to those held at Paris, Chicago, or St. Louis. My answer was that the former cannot be compared to those of large continents, as it was merely the exhibition of a small island not long ago thrown open to civilisation: as such it was of interest with its own special development. Anyone desirous of studying the economic and industrial development of New Zealand, would find plenty of opportunity of so doing at the Christchurch Exhibition.

* The splendid state of public safety is partly due to the high wages: it is desirable that everywhere the greatest improvement possible should be obtained in this respect; but then a stop should be made, — a course that is scarcely feasible with workmen for dictators.

Of the various sections of the New Zealand Exhibition, I found the agricultural one the most complete. For instance, an original and instructive idea was a botanical garden of the useful kinds of fodder planted in separate plots, exhibited in the various stages of development.

From a tourist's point of view, the large photos of the finest scenery and the New Zealand antler trophies displayed in the tourist department were the most attractive objects.

The large lumps and fancy articles made of the gum of the kauri tree, which is dug up like amber and is similar in appearance to the same, as well as the primitive Maori carvings, weapons, and articles of green stone, were the most original exhibits. The Maori carvings, made with primitive tools, as such represent an artistic value. Considering that the natives have for the most part already given up carving, the articles that still survive are becoming every day more valuable. E. g. for a small tiki (caricature figure of a man) of green stone, pounds are paid: while larger specimens fetch such a heavy price that they are beyond the reach of any but collectors.

At the exhibition a few natives were also engaged in selling wares: as far as I could see, they are clever tradesmen and intelligent men.

One of the most attractive sights of the exhibition was the Pa, — a fortified place enclosed with two rows of sharply pointed stakes. At the entrance of the Pa, which was fashioned after the model of the old Maori villages, and in a few other places, carved figures of heroes painted red, with their tongues lolling out, had been set up. In the dwelling-houses within the stockades, we met Maori inhabitants who were either quite stout or had an inclination that way. Smoking is their favourite pastime; even in the women's mouths pipes are often to be seen. Tattooing of the under lips and the chins is almost general among the Maori women. In other respects, the Maoris,

who a few decades ago were cannibals, are today yielding to civilisation; most of them have become converts to Christianity; their love of their race is very intense, as is the case with all the Polynesians, to which race they too belong.

As exhibitors, Great Britain, from Australia the province of Queensland, and from America, Canada was represented. In the Canadian section, the mining exhibits, in the British section, the picture gallery and the educational exhibits were the best: another remarkable part of the British section was the group of spectographs, the astral spectrum, and the medical, comparative and other scientific photographs.

Of an afternoon and evening two bands gave concerts, a celebrated brass band from England, and a philharmonic orchestra composed of musicians from Australia and New Zealand. The programme of the philharmonic orchestra every day contained one piece by Wagner: Popper's «Hungarian Reverie» was also performed on the 'cello, with pianoforte accompaniment.

Eight miles from Christchurch lies its port of Lyttelton, with a population of 4,000. The town, with its bay protected by a peninsula and by islands, is surrounded on the land side by a semi-circular ridge: the tunnel 2866 yards long which passes under the latter is the longest tunnel in the southern hemisphere.

From Christchurch to Greymouth.

(158 miles.)

The Ottira ravine. Navvies.

The line communicating between Christchurch and Greymouth, a town on the west coast of New Zealand, passes through the Ottira gorge. After 56 miles of railway, at the station of Broken River the passengers are trans-

ferred to a coach for the remaining 51 miles to the station of Ottira, from whence another 51 miles of railroad takes us to Greymouth. In ordinary circumstances, the journey takes from 7. a. m. to 8. p. m., — but not in the rainy season, when I had the misfortune to travel.

The cultivated plain that had been before us since Timaru, near Broken River was replaced by a mountainous district; after several short tunnels, at the station of Broken



Crossing the rushing Wainakakiri.

River we reached the terminus, where five comfortable coaches, built on the model of the American Cobbs, were waiting to take us up.

Hardly had we started when a hurricane blew clouds of gravelly dust into our eyes, bringing with it drops of rain from the clouds that were well in advance of us. Along the broad, gravelly bed of a river we passed, between yellow, barren hills, towards the station of Bealey

where we were to stop at midday. Before Bealey, we came face to face with the wildly rushing Waimakakiri, with its gravel bed, and its many branches. Seeing the swollen state of the river, our driver sent us to dinner with the not particularly reassuring remark that we need not hurry, as we could not cross the furious stream that day.

At dinner the traditional mutton was hot and hard as iron; in the evening it was cold and equally tough; so there was no difficulty in eating slowly, and in remaining where we were. The majority of the passengers spent the night in company; I myself however had been wise enough to engage a small room early, and, to prepare for the worst, wired to Ottira, the next station, to reserve a room for the following day.

On the morrow, without regard for the fact that the showers of the previous day had completely spoiled the roads, we were started on our way at the usual hour. We were lucky to have been sent off at all, as it was Sunday, the day of rest and leisure.

Before the coach, in high top-boots riding on an old grey, was a postillion. When we arrived at the first rushing branch of the Waimakakiri, I thought the torrent would overturn him: but the old hack stood his ground well, as did the other five horses harnessed to each coach. The experiment was repeated about five times: on the sixth occasion we waded through the Bealey brook; and the grey hack left us, while we drove on up an ever narrowing valley, through mountains overgrown with evergreen New-Zealand trees and bush.

The interesting journey over the water and the beautiful scenery might have made us forget the one day's delay; only suddenly the signal was given to «stop». A swollen mountain stream had washed away the road leading down to and up beyond the same, and had rolled large stones in our path. On the opposite bank two navvies

were standing waist deep in rubber top-boots in which any lord might sit comfortably while on the watch for wild duck. They must have been waiting for us, for there was absolutely no trace of their having done any work. I should have liked to have them treated to summary justice; but such a course was impossible in the face of the dictatorial supremacy of the labourers in this island colony. In their



The Devil's Punch Bowl waterfall in the Ottira Glen.

dilemma the passengers set to work to roll the stones away; and after half an hour's delay, the coaches were able to cross the brook. It is a wonder that not one of them overturned during the passage up and down steep inclines and past sharp corners.

After the heavy rain, Arthur's Pass showed its waterfalls in gigantic proportions, particularly the Devil's Punch Bowl waterfall, which is 500 feet high. From the highest

point (3000 feet) the road descends in sharp zigzag line, after a sharp turn we were finally obliged to give up coaching, as the road has been completely washed away by the floods. Leaving the coaches behind us, we walked the remaining 4 miles to the station of Ottira.

It was a good thing I had wired for a room, as we spent the night there. In the evening my fellow-passengers held the usual Sunday service, and, like true believers, acquiesced without a murmur in the unchangeable.

No doubt there is much to be said for the virtues of the English race : but here in New-Zealand a little Continental «brute force» and arbitrary conduct would be more to the point!

The next day we proceeded by train. The valley which from the station of Ottira widens out, is overgrown with luxuriant vegetation and tall trees. Twenty-eight miles further on, at the station beside Lake Maona, and a few miles beyond, two steam saw-mills are engaged in working up the wood material; before Greymouth we come across coal-mines.

From Greymouth to Westport.

(58 sea miles.)

Greymouth, the largest port on the west coast of the South Island, is a town of 4000 inhabitants. The harbour is protected by artificial breakwaters.

I had intended to proceed by coach from Greymouth to Nelson, a port to the north, leaving there in the afternoon by boat for Westport: but for the sake of a change, I preferred to take the sea route; besides I should thus have an opportunity of seeing the most beautiful part of the Buller Valley, a sight I should have been deprived of, if I went to Nelson direct.

Steaming out of the harbour, for some time we saw the western Alps shining white in the distance behind us, among them the prominent peak of the Cook Mountains.

Near to Westport, beside an elbow-like bend of the Coast, a row of rocky islands stretches out into the sea: the vicinity of these islands is peopled by large white-bodied divers with dark-tipped wings, as well as by flocks of sea swallows. These white divers (*disporus*) skim the surface of the water either singly or in pairs; if they rise, they are on the watch for prey, and on such occasion shoot down while in flight with the speed of lightning into the water, throwing up a large quantity of the briny element to a great height as they dash below the surface where they remain for a moment or two.

After 6 hours' sailing we arrived off Westport; but in order to be able to put into the harbour protected by breakwaters, we had to wait an hour or two until the turn of the tide.

Westport, with its 3000 inhabitants, is the most neglected of all the towns I saw on the South Island.

From Westport to Nelson viâ Kohatu.

(137 miles.)

The Buller gorge.

We left Westport before 8 a. m. in a comfortable coach: before leaving the town we stopped several times to take up letters, so on this occasion too we did not fail to preserve the tradition of starting late. Consequently, before reaching our station for the night, we had to drive an hour in the dark, with five horses, among the hills.

For about 90 miles to the N. E. of Westport the carriage road leads through a glen on the banks of the river Buller. After driving a good half hour we were ferried across the river, and then continued our journey along the banks of the Buller.

The glory of the Buller Valley is its luxuriant vegetation: the low hills are entirely covered with primeval

bush, the trees are overgrown with brush, and the *gigî*, a parasite in appearance like reed grass, grows in large clusters at their branch (at first sight it looks as if the trees had two kinds of leaves), while the ferns attain a height of 12—18 feet. These latter, with their slender dark-coloured stems, are more pleasing in appearance than the thicker-stemmed ones seen in Tasmania.



Scene in a primeval forest ; in the foreground a two-branched tree with the parasite *gigî*.

The finest part of the route was that traversed within about the first hour after crossing the ferry.

The rapid stream of the Buller in places widens out; here pebbles the size of a man's head lie on both sides of the river: then the bed narrows again, passing between rocks, and winds on through the verdant hills. The cuttings in the banks display gravelly sides: only here and there rocks may be seen peeping forth.

On the hill-sides we see gold-washers; where the river widens, three gold-washing dredgers are at work. In the more rocky spots attempts have also been made to dredge: but owing to the sudden swelling of the stream, this is a dangerous undertaking, a fact proved by the wrecks of two boats to be seen at this point.

The road winding past steep precipices puts the driver still more on his mettle than on the other carriage



Fern thicket in the Buller gorge.

roads, for there is more traffic here, and two five-in-hands have only just room to pass: in fact in most cases the outer wheels of the carriage which stops to let the other go by are actually on the edge of the precipice.

The «postmaster's» work of the coach-driver is also more burdensome on this line than on any of the other tourist routes. When it started, the coach was packed with parcels and letters; the driver had no time to get off

to deliver them, but merely threw them off and took the others up while in motion. But at the telegraph and post offices everything had to be entered in books. In general, the schoolmistresses living near a few farms are entrusted with the management of postal affairs.

At one of the farms a yellow and white dog was waiting for us, excitedly wagging its tail; it took up the



Typical labourer's cottage in the Buller Pass.

letters thrown down from the coach in its mouth and carried them in to its master.

After driving for 65 miles, the valley in places becomes very broad; here charred trees of a primeval forest are lying about, and on the edge of the burned-out woods we find green pasture-lands and farms. The nearer we approach to Kohatu — 106 miles from Westport, the more advanced is the state of the farms we see.

From Kohatu to Nelson the railway line passes through a flourishing agricultural district. Here there are small hop-fields: as we passed, the hops, which were laden with flowers, were just being picked.

The bush is extirpated where the soil is fertile: such a course has been taken between Kohatu and Nelson, though a worthy inhabitant of the latter place has preserved a small plot of primeval forest for the benefit of posterity. In the vicinity of Nelson, fruit trees are planted by preference around the houses, between beds of flowers and ornamental trees.

The apple and pear trees were heavily laden with ripe fruit: and the few walnut trees to be seen here produced thrice as many walnuts as they do on the average in Europe.

In the bay on which Nelson, a town of some 7000 inhabitants, is situated, at low tide we see a line that looks like a natural breakwater: here too, as in most ports in the island colony, ships of deep draught are obliged to reckon with the state of the tide.

From Nelson to Wellington viâ Picton.

(138 sea miles.)

Pelorus Jack, the dolphin protected by the State.

On March 7, 1907, I left Nelson by the S. S. «Penguin». Before I started, my driver informed me that I should see Pelorus Jack, a marvellous fish which had accompanied ships through the French Pass from time immemorial. «He has a bee in his bonnet», I thought, and prepared for the voyage without giving a single thought to Pelorus Jack! When, after passing through the straits between the main land and Urville Island, we reached the French Pass, I saw that the passengers had all collected in the bows of the ship and were pointing down to the

sea, now on this side, now on that. I joined them. Everybody was talking about Pelorus Jack, the name given to the worthy fish which was the familiar acquaintance of all passengers from Nelson to Wellington.

The captain of the «Penguin» had known the creature for 10 years; but he was said to have followed the ships through the French Pass for 30 years. He generally appears within a prescribed distance and leaves the ship again at the same appointed place: on this occasion too we caught sight of him first at the point where the passengers expected to see him. He swims on just in front of the ship's bows, appearing first to the right and then to the left just below the surface: often enough he rises to take breath, but does not leap up like the dolphins: nor can his movements be compared to the rising to the surface of whales. For about 20—25 minutes he raced the ship, then fell back altogether, as was his wont. Jack's familiar acquaintances pretended that Master Pelorus had certain favourite boats which he particularly delighted in following. He appears of nights too, a fact of which people have become aware when the sea was phosphorescent.

By a decree published on Sept. 26, 1904, the Governor placed Jack under the protection of the State, as we may read on the picture postcards provided with his photograph and a short history of his career.

After numerous observations, zoologists have come to the conclusion that Pelorus Jack belongs to the *grampus griseus*, a rare species of dolphin. The forehead of the bluishwhite fish variegated with uneven stripes is almost rectangular; the extremely high fin on its back is bent backwards; its two side fins which widen out at the lower end are also bent backwards and look like swords; the fin attached to its tail is divided into two parts and is quite level. Considering that this species of fish can live for 200 years, the worthy Jack may yet serve as a passenger for many a passenger through the French Pass.

There is one more speciality of the northern coast of the South Island, — the roundheaded tuatara lizard (*sphenodon punctatum*) with alligator-like scales, that attains a length of two spans. This animal inhabits one of the islands to the N. of the French Pass.

In the vicinity of Urville Island several smaller islands and rocks stand out of the sea, — as well as in the proximity of promontories jutting out from the mainland. Both the direction taken by the ridges of the hills and the islands connected with the same, point to a chain stretching from the N. E. to the S. W.

Near the islands I also saw the white divers (*disporus*): but here they did not shoot down into the sea, probably because the deep water offered no opportunity for fishing, — or perhaps the weather was unfavourable?

After passing the islands, we sailed into a fjord-like bay stretching far inland: but, as darkness fell over us, I could make out the outlines only. The hills skirting the bay are not high. We stopped at the town of Picton, at the head of the bay. On the way back, for some distance we sailed along the bay already mentioned and on March. 8, we put in at Wellington in the North Island.

Wellington, the Capital of New Zealand.

Maori house in the Museum.

About 6. a. m., I got up and looked round the harbour. The large land-locked harbour is the best port in New Zealand.

Wellington, the Capital of the island colony, with its 50,000 inhabitants, at once struck me as being a great city: notwithstanding the early hour, I found carriages and even men willing to carry my luggage. This was quite unusual in New Zealand, at 6. a. m.! On my way to the hotel I noticed a bustle in the streets: the electric cars

had started running, making quite a European noise with their bells; newsvendors had begun their rounds; only the mounted bakers with basket on arm and the butchers remained true to New Zealand habits. If I add that, as the town situated between the sea on one side and hills on the other has no room for expansion, the streets are narrow and the houses — with few exceptions badly constructed wooden buildings which the sun's rays pierce through and through, where the din of the streets penetrates to the very marrow of your bones — are lofty, it is easy to imagine how eagerly I would have given up the city-like character and customs of Wellington for the peace and quiet of an ordinary New Zealand life. It lacks everything that is so attractive in the other New Zealand towns and offers no pleasing diversions to make one forget its drawbacks.

The great sight of the Museum is a native dwelling constructed by Maori master-carvers in 1843 and purchased by the State in 1866. This house is made entirely of wood: the sides — as in the Maori house exhibited in the Christchurch Museum — are adorned with carved figures. A few warlike chieftains are immortalised here too with tongues lolling out, holding in their hands the «miri», an oval-shaped weapon provided with a handle.

In the Museum live specimens of the *sphenodon* lizard brought from the islands near the French Pass are kept: the large-eyed animal never blinks. As it gazes unflinchingly, upon us, its look suggests that it is brooding on the far distant past, on the home of its ancestors.

The library of the Parliament, which is grouped according to branches and is very extensive, was founded 30 years ago. When Parliament is not sitting, strangers may visit the library, if introduced by a member.

In the streets of Wellington we often meet with natives; in the shops we also see Maori tradesmen.

The look-out in the neighbourhood of the botanical gardens is reached by a cable railway: here I found a

spacious kiosk, where coffee-house drinks and cakes are to be had. I sat about for a time, then went away with the intention of coming back to this picturesque spot for supper (dinner). I did so: but, as nothing is served in the kiosk after 7. p. m., I had to go back to the hotel and the din of rumbling electric cars. After supper (dinner) I packed: and on the morrow, despite the crowded state of the train, I felt a relief as I saw disappearing in the distance behind me the picturesque but nerve-shattering town of Wellington.*

From Wellington to Wanganui.

(150 miles.)

Wanganui. Maori inhabitants of New Zealand.

From Wellington the railway leads N. E. to the town of Palmerston North, 87 miles distant, and then turns in a north-westerly direction. All along the line the place of the woods burned down some time ago has been taken by excellent pasture-lands. The bush has been destroyed: only in a few marshy spots primeval trees are still standing, either drying out fast or already completely dried out. In many places the parasite *gigi* may be seen growing at the lower end of the branches, — not only

* In New Zealand, where even in the towns life is quiet and peaceful, the nervous system of the inhabitants is as a rule a healthy one: the only exception to his rule is afforded by the Wellingtonians. After 2½ months' wanderings in New Zealand, whenever anyone told me he was obliged to repair his shattered nerves, I knew at once that he was a Wellingtonian. Such a state of things can only result from the noisy bustle of life in a capital. I have often wondered why the loud hawking of newspapers in the European towns is not forbidden, as well as the din of advertising, the rapid driving of carts with heavy loads etc. The observations made of the inhabitants of Wellington and of those of other New Zealand towns only served to confirm me in my opinion that such measures are indeed required.

of trees still living but of those too which are quite sapless.

Wanganui, a town of 7000 inhabitants, lies on the right bank of the river of the same name, at a distance of 4 miles from the coast. Here the aborigines are quite at home. In the main streets they may be seen lolling about, both young and old: they are all well-conditioned, often inclined to be fat. The women wear clothes of a lively hue, with panama or soft men's hats on their heads, ornamented with a single feather of the «huia» (*heteraloha acutirostris*), a bird which they consider as sacred: the only jewels they wear are *tikis* hung round their necks on a simple cord; — these «tikis», caricature figures of men carved out of green stone, are often family heirlooms. Married women still delight in having their chins and lower lips tattooed. The men have completely adopted the European style of dress and have given up tattooing. They live in the most perfect harmony. When they meet a relation or acquaintance, instead of kissing they rub noses. This is done with so much affection and tenderness, that when I first saw such a rubbing of noses,* I was not struck so much by the comical nature of the ceremony as by the extreme affection expressed by the action.

The children are very well treated: I never once saw any parent use a severe mode of punishment.

I witnessed a most original scene in Wanganui. In a crowded street there suddenly appeared a horseman duly spurred, riding a stubborn yellow horse bare-backed. The creature refused to move; the rider sat calm and unflinching. Suddenly the colt started off, buck-jumped once or twice — and his rider lay flat on the macadam pavement . . . No-one took any notice . . . New Zealanders are born horsemen who train their mounts in streets! —

* This method of salutation is in vogue with the Polynesians living on the islands of the Southern Pacific, — a race to which the Maoris too belong.

The rider again got on his horse's back, and rode off quite unperturbed: the first lesson in breaking-in was over.

Up the river Wanganui to Pipiriki.

(57 miles.)

Maori fellow-travellers.

We left Wanganui at 7. a. m. on March 12, by the tourist boat which runs three times a week. The passengers consisted partly of tourists, partly of aborigines.

At the send-off, I witnessed a great Maori rubbing of noses: everybody was only too happy if he had an opportunity of rubbing the nose of a relative! As the boat steamed off they all had still plenty to say: they did not mind shouting their remarks out quite loud to the people standing on shore, who vied with them in returning equally vociferous answers. «I shall have a pleasant journey», I thought, «if these same denizens of the wilds continue to converse in so high a tone»: but I was mistaken. They talked, smoked their pipes and cigarettes in perfect peace and quiet. The noisy process of exchanging views carried out by those on board and those on shore, was only repeated at the stopping-places where the rubbing of noses was also renewed as the Maoris joined the boat or went on shore.

The stopping-places, which consist of a few houses, are generally situate on terrace-like projections of the steep banks. The majority of the people living there are aborigines. At one of these stations the mistress of the Maori school went on shore. The brown-skinned children were waiting for her: they joyfully surrounded her as she stepped from the boat, — and indeed no one could help loving these patient, goodnatured school-mistresses!*

* The Government of New Zealand takes every trouble over the schooling of native children. Not only do the natives enjoy the right of free schooling and exemption from land taxes: in other respects they

Besides the stopping-places, here and there we see Maori tents or cottage-like dwelling-houses: and on the banks as a rule punts made by natives may be seen. These punts, which are disproportionately long and narrow, are bent upwards at both ends and are not very elaborate. The ornamental carved boats in vogue formerly were nowhere to be seen.



Sailing up stream on the river Wanganui, by the aid of a wire rope.

The very rapid stream is full of sharp turns, at some of which, by sluices placed in the widening gravelly bed, the direction of the flow of the water has been regulated. Here and at the rapids the force of the water is so great

possess exactly the same rights as the white inhabitants. With such a system it is no wonder that they have become entirely reconciled to civilisation. Naturally such a state of things can only be realised by Englishmen with all their indulgence, regard for public interests and their religious disposition.

that the boats could not make any progress against the stream: this difficulty is got over by the aid of wire ropes fastened in the bed of the river. When the boat reaches the lower end of the rapids, with a hook fixed to a long pole the lower unfastened end of the rope is fished up and secured to a steam windlass in the bows, which helps to pull the boat up to the farther end of the rapids. This



On the river Wanganui.

slow process, which is several times repeated, makes the journey up stream rather tedious: so the majority of the tourists prefer to make the journey down stream, either from Taumaranui (136 miles) the highest navigable point, or from Pipiriki (57 miles), to Wanganui.

The vicinity of the river Wanganui is, in point of scenery, somewhat similar to the Buller Pass. From the river the banks look like low hillsides: though these de-

posits of clay and sand stone open on to a plain. The banks are covered with bush down to the water's edge: while the large willows that flank the stream were in part planted by the first missionaries. The monotony of the bush is relieved by small graves of ferns: and this gives the vicinity of the river Wanganui its character. The New Zealand manycoloured bush with groups of ferns that in the distance wear the appearance of palms, seems to be a pompous union of the temperate and tropical zones.

From Pipiriki to Taupo.

(105 miles.)

District reserved for aborigines. Vicinity of the three volcanoes.

The moment we started from Pipiriki we left the Wanganui valley and entered another one.

In the broader parts of the bush-covered valley we saw mighty trees too, whose trunks were thickly overgrown with moss. The parasite *gigî* too grows in masses in this valley, which abounds in water and rain. The quiet of the primeval forest is at times disturbed by the soft melodious song of the tui bird.

As on the banks of the river Wanganui, the low-lying hill-sides are composed of clay. For about the first two-thirds of the whole distance, the roads are repaired with stones containing snail and other shells. The conchites formed by the deposits of water are brought from the ridge hard by, where they are found over a stretch of ground several miles long.

Before reaching our midday station we saw the shapely cone of the volcano Ngaurahoe (7481 feet high) smoking in the distance, and, to the south of the same, nearer to us the snow-crowned, flattened cone of the volcano Ruapehu which is no longer active.

In the afternoon we crossed a plain thickly overgrown with gigantic trees. Around the farms we passed, the forest giants had already been burned down : and two steam saw mills had helped in the work of destruction. The time is fast approaching when they will be easily turned into money : for before long the railway line which is now building, to connect Auckland with Wellington, will be opened and will pass this way.



Barber's shop and «court» photographer's studio in the town just being built.

We stopped at a new settlement near the coach route. It was a most original little spot ; the centre was formed by a comparatively large hotel and a small post-office, round which were grouped wooden houses in course of building, and tents. In a tent 4 yards wide the «court» photographer had his headquarters, while in another the barber plied his trade. Besides these, the «grand store» for supplying every want, and a saddlery represented the

business world of this little place, which is destined to have a great future.

The plain and the woods in the neighbourhood belong to the natives. By law they cannot be sold except to the State. The explanation of this provision is that, in case of sale by private agreement, the natives, who are by no means acquainted with the laws, have often, even after the sale has been effected, laid certain claims to the property once theirs, a fact that often leads to disputes about rights of ownership; while on the other hand white men have often taken advantage of the natives' ignorance to get hold of property at a price below its real value. But these estates may be leased. In the whole so-called «maori preservation» the sale of spirituous liquors is prohibited, a clause included in the final treaty of peace made with the white inhabitants, on the proposal of the various aboriginal chieftains.

The wooded territory was succeeded by excellent pastures, in their turn followed by a bleak and barren stretch of country similar to the yellow brushwood of the South Island. In the distance we drove almost round the vicinity of Mount Ruapehu. The sides of the hill on the west are regularly formed: to the south and east they become more unshapely at every step. The edge of the crater declines eastwards; and on the eastern side more matter has collected than on the western side. Today Mt. Ruapehu no longer produces lava: during the more recent eruptions, e. g. in 1895, around the edges the water of the lake in its crater some 500 feet in diameter was heated by the gases that were shot up. The surface of the water is 300 feet below the top of the crater-walls that surround it.

Before reaching our station for the night, we saw a curious waterfall. The stream flowing across the plain fed by glaciers suddenly makes a surprising leap and forms a little bay which no-one would have expected from this miniature Niagara.

Waioru, the station where we spent the night, is in the vicinity of the route to be taken by the new railway line from Wellington to Auckland. Here the cuttings show layers several feet deep of volcanic cinders and rapilli below the vegetable mould which is here a few inches thick. Here and there, for the most part from beneath the layers of rapilli, charred tree-trunks and branches peep



Waterfall on the plain, near Waioru.

forth. Even before the time when observations began to be made here, the primeval forests were swamped by boiling showers of rapilli, as at Pompeii, to such an extent that the trees were charred and burned out.

Scarcely had we reached the hotel when there arose a storm accompanied by rain which lasted till the following day. At 6. a. m. we started again, in rain. During the whole journey the clouds were very low, so low indeed that we

could not see the three volcanoes, Ruapehu, Tongariro (6460 feet high), and Ngaurahoe*, though we were quite close to them. But even so anyone interested in geology could find plenty of material for observation on this road. For hours we traversed a country thickly covered with ashes and rapilli. As shown by intersections made, the cinders and pumice stone (pumis) settled in layers. In some places,



«Here and there, or the most part from beneath the layers of rapilli, charred tree-trunks and branches peep forth».

deep down below the surface, a thick stratum was formed of the oval lava stones brought there by water; while in others, below the layers of stone we again see cinders and rapilli. In one place charred wood also constitutes a layer.

During the last quarter of the journey, the road is

* From Mt. Ngaurahoe lava flowed for the last time in 1868, during the eruption of Mt. Tarawera, which is situate to the N. E.: 'since then it has been smoking and vomiting ashes.

surrounded by low-lying hills overgrown with bush. After driving 44 miles, leaving an old semicrater overgrown with bush and a coneshaped hill standing by itself to the left, we reached the village of Tokaano at the southern end of Lake Taupo. Here, high up on the slopes of a hill, vapours rise in several places: just under the bridge leading into the village a hot spring bubbles up, while white steam partly hides the first house we catch sight of.

Tokaano is the haunt of anglers, who fish in the river Waikato which empties into Lake Taupo. In the dining-room of the hotel figures of large fish cut out of stiff paper ornament the walls, — silhouettes of the largest trout caught during the current season. The two largest fish weighed $23\frac{1}{2}$ and $24\frac{1}{2}$ pounds respectively. There is an abundance of fish: but as the stream affords plenty of food, the fish are not easily attracted by bait. The best results are obtained by fishing on moonlit nights.

Several aborigines live in Tokaano: the group of local celebrities who collected round our coach was joined by a few picturesque Maori girls.

From Tokaano, after sailing for 25 miles, we landed at the village of Taupo situated at the northern outlet of the lake, from where we drove 2 miles to the station of Taupo Spa.

Taupo Lake is the largest lake in the North Island: its length is 25 miles, its breadth varies between 11 and 16 miles; and it is situated 1211 feet above the level of the sea-coast. Near to the northern shore, stands the volcano of Tauhara — now no longer active — 3600 feet high, with its semi-crater: it runs parallel to the volcanoes Tongariro, Ngaurahoe and Ruapehu, which stand in a row to the south of the lake.

Taupo Spa and its environs.

The Taupo Geyser Valley. The Aratiatia Rapids.

Taupo Spa lies in a small valley surrounded by hills of volcanic ashes. This watering-place, wedged in between warm springs and geysers, is rendered most habitable and snug by the ground-floor wooden houses, the cold and



Maori building at Taupo Spa, used as a dining-room.

warm mirror baths, and the Maori building enclosed by a little garden full of old and valuable Maori carvings and used as a dining-room.

A foot-path leads up to the hill behind the spa: the sides of the path are thickly overgrown with manuka bushes. After an easy walk of ten minutes from the hotel, we arrive at the river Waikato. The transparent stream of a green hue bears the crystal-clear water of Lake Taupo

rapidly downwards. In the middle of the river our eyes fall upon two eyots, and on an enormous yellowish brown hivelike formation on the hither bank: the latter was built up by a geyser.

The Crow's Nest, as it is called, is active every 45 minutes. When I reached it, it was steaming heavily; and from its depths a rumbling sound could be heard.



The silicate formation built up by the Crow's Nest Geyser,
after an eruption.

Then the fumes decreased in intensity; and the rumbling subsided: we had evidently approached it just after an eruption. We walked round it, peeped into its interior: then retired to a safe distance to await its firework display. About 40 minutes later, steam began to rise in ever increasing quantity, and all at once a spout of water mingled with a cloud of smoke burst forth from the geyser. The first spout smothered with steam was followed by other

still compacter spouts. The repeated shocks emitted spouts of ever diminishing height; while the brilliant sun-rays glanced a rainbow-light over the falling spray. The greatest height attained must have been about 70 feet. The whole display must have lasted about two minutes. Twice more I saw the geyser in full activity, the second time in the evening: though naturally the sight is far more superb by sunlight. Anyone who is acquainted with the usual



The Crow's Nest Geyser in full activity (Near Taupo Spa).

bleakness and barrenness of the environs of geysers, can imagine how much more thrilling it must be to see a fountain of this kind playing with spouts of boiling water amid verdant vegetation, by the side of a crystal-clear river!

In the neighbourhood of the Crow's Nest there are three other geysers on the bank: but as the high water had completely covered them, they were not active.



The Aratiatia Rapids (7 m. from Taupo Spa).



The Huka Falls, on the road from Taupo to Wairakei.

From two cave-like openings on the bank behind the geysers, water and steam was spouting forth: while higher up on the slope solphataras, white and brick-red mud geysers were panting, bubbling, and puffing.

There is a very curious fissurelike recess, with a side-opening level with the bottom, through which opening boiling water and steam unceasingly pour forth with throbbing motion, making a noise like that of a paddle-wheel. The various alkaline, sulphuric and arsenical clay-like coloured deposits to be seen round the geysers and warm springs have built a wall many yards high round about this throbbing cave. In many places in the vicinity of the solphataras and hot springs, the earth rings hollow beneath our feet.

Seven miles to the north of Taupo, the river Waikato is wedged in between dark walls of lava and forms the Aratiatia Rapids, and a few miles further on the beautiful Huka Falls. Both in this place and in the vicinity of the lake we find an abundance of obsidian, in addition to which pumice stones of the size of a man's head or even larger form a thick stratum.

Lake Rotokawa.

(8 m. from Taupo.)

On the way to Lake Rotokawa, which lies to the N. E. of Taupo Spa, we leave the extinct volcano of Tauhara on our right: farther on our attention is attracted by another old hill standing by itself, the two sides of which bend inwards like a crescent, while its centre lies far lower and looks like a mound wedged in between two crooked hill-fragments. This hill of unusual shape must also have helped Mt. Tauhara to cover the vicinity of the lake with layers of cinders, rapilli and pumice stone, so thick that from the upper layer to the deepest cutting in this district we see nothing but these materials.

On the loose spongy soil only the manuka bush and dwarf trees grow wild: but that with proper cultivation this could be converted into fertile land is shown by the large trees of angry green hue of the European alley planted round the Spa.

Beyond the curiously shaped hill, we catch sight of the Kenguru plain: if we look suddenly upon it, it wears the appearance of being the outline of a distant sea.



The sulphuriferous district of Lake Rotokawa.

One shore of Lake Rotokawa is surrounded by reed grass, near which black swans and wild ducks are swimming. The cold fresh water lake adjoins a boiling sulphuric pond; the two are divided in part by a narrow tongue of land. Near its edge, the boiling pond is yellow from sulphur deposits. The whole district is a sulphur mine still in process of fermentation. In deep cavities boiling water impregnated with sulphur is bubbling; in other places sul-

phur fumes are rising: while in spots already dried up, under the upper stratum, lumps of pure yellow sulphur (mixed with red or white clay) have been formed. Here and there we find dark grey sulphur stones too. Deposits of yellow and coral hue make a pretty picture of the ground surrounding one of the cavities: the whole cave-like hollow is yellow, and the yellow background is enlivened with stripes of the colour of coral that descend from the edges of a similar hue. The colour effect of the whole seems to suggest that a painter has helped Nature the artist to arrange the picture.

On our way back we visited the two rabbit-trappers engaged by the State, who live in the vicinity of the lake. Of their two tents, one served as a dwelling-house: in the other, the «dining-room», they offered us tea, butter and sirup. In this district the rabbits are exterminated by the aid of semolina mixed with phosphorus: but the poison, which is strewn on upturned sods, does damage among the poultry too.

As we returned home, we saw two stray horses in the distance: as soon as they got wind of us, they galloped off just like wild animals.*

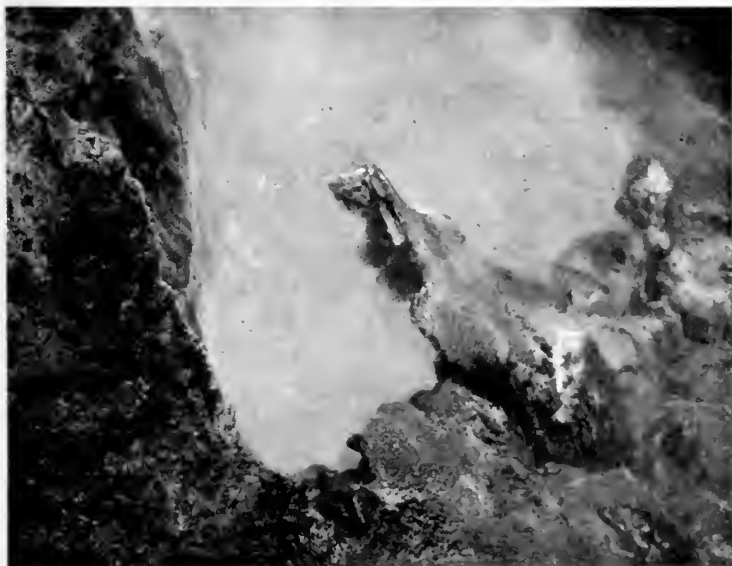
The Wairakei and Waiora Geysers.

The Great Steam Hole.

The Wairakei Geyser Valley is situate 7 miles from Taupo, and only one mile from the very comfortable watering-place Wairakei. Here too, as in the neighbourhood of Taupo Spa, the geysers fume and sputter in the midst of manuka bushes: but in point of scenery, this district cannot be compared to the valley of the Waikato.

* Both in New Zealand and in the other islands I visited, stray domestic animals may be found. In the islands of the Pacific Ocean there has been a great increase in the number of stray pigs.

The Great Wairakei, the Dragon's Mouth situate opposite, the Terrace group, the Terekere and many other geysers, the boiling ponds with their water of azure blue, the smaller hot springs, the puffing mud geysers, the Champagne Pole which is continuously in activity, and other volcanic phenomena, are all to be found on the banks of the brook Wairakei and a stream of warm water.



The crater of the Dragon's Mouth Geyser (near Wairakei Spa).

The crater of the Great Wairakei geyser in the centre is a silicate formation open in two directions: it is in activity every ten minutes; from the first spout of water till the last, about 3 minutes pass away. The greatest height attained must be about 40 feet.

The Dragon's Mouth has also built for itself an entrance, the appearance of which has given it its name. The crater does not open downwards; but it gets water

from the side. It is active every 10 minutes, and for several minutes vomits out boiling water over the immediate vicinity. As soon as it has finished its work and the water that has collected has flowed down into its basin, one can pass through its mouth: but these few steps make your body glow and sweat far more than any steam bath.

Round the Terrace group of geysers on the rocky bank of the brook Wairakei, as in the vicinity of artificial grottoes, high grass and shrubs make a pretty picture: while the edges of the brook are overgrown with water plants.

On one side of the Terrace group, in a basin surrounded with spongy soil, are situated the two geysers called the Twins. One of the twins appears on the scene every 4 minutes: first it raises the water contained in the basin, then follows a small shock, and later several larger shocks; the larger shocks force upwards practically the whole of the water contained in the basin with a detonation like that of blasting, to a height of from 3 to 15 feet. The other twin commences its activity about every 15 minutes, lashing part of the water in the basin into waves with a noise like that of the paddles of a steamer about to stop.

Above the Terrace group of geysers, the water of a small hot spring collects in an elongated basin: the water that flows over the brink has found its way by dripping into the basin of the Prince of Wales' Feathers geyser situate some distance away farther down. In ordinary circumstances the latter geyser only emits its spouts of water which spread in two directions, a few times every day: but it has been discovered that if the overflow of the above-mentioned hot spring is diverted from its course and not allowed to drip into the basin of the geyser, the wily Prince of Wales' Feather begins to work within 25 minutes. Ever since the discovery was made, the Prince of Wales' Feathers geyser has worked by clockwork; i. e. in ordinary circumstances the overflow is left to pursue its ordi-

nary course, but, the moment an inquisitive tourist arrives on the scene, the guide shuts off the communication, and within 25 minutes the double spout of water resembling the Prince of Wales' Feathers appears on the scene*. The good-natured geyser has one more indicator, — a small-mouthed fountain in the vicinity, which, before the Prince begins his work, shoots up three or four spouts of water,



The Twins at play (Wairakei).

— and not till the last spout has ascended does the double feather appear on the scene.

The Terekere geyser is continuously on the boil; but its spouts only attain a moderate height.

* The explanation of this phenomenon is that the water dripping slowly down from the hot spring reaches the basin of the geyser in a cooled condition, and so hinders the process of warming the water in the crater of the Prince of Wales' Feathers.

In the basin of the Champagne Pole 50 feet in diameter, large bubbles are continually rising: while on one side of the same the boiling water of a spring working without intermission tosses up waves. The rocky wall forming the background of the basin is entirely hidden from view by thick steam. Only a strong current of air enables us to get a full view of the volcanic creation, which represents an enormous natural power. The spot where the overflow of the basin runs off is discoloured by deposits.

One and a half miles to the S. W. of the hotel, in the Waiora valley, we see volcanic basins also situated on the two banks of a brook. The bed of the warm, gently trickling brook is orange yellow for almost its whole length, from the deposits of silicate: in one spot we have an orange-coloured terrace, in another a waterfall of a similar hue. The two banks are thickly overgrown with manuka and moss, while amid the green vegetation hot springs and mud basins give off vapours.

The contents of the basins are of the colour of milk or blue as a turquoise: from among the bushes an emerald-green sheet of water peeps forth upon us, while another plays in brick red hues. In all of them there is such an abundance of silicate deposits that part of the basin is filled up by that yellowish material.

This district of hot springs in the immediate vicinity of the Wairakei geyser valley seems to display a more advanced state of volcanic activity approaching to extinction. The Waiora valley opens on an extinct crater overgrown with vegetation. In a small part of the crater-mouth lava walls may be seen: while under the rocky part beside it, at the bottom of the crater, sulphur has been deposited. The sulphureous district still generates warmth: in one spot a very thick charred tree trunk peeps forth, and in the same place I noticed a rumbling noise proceeding from far below the surface. Farther on boiling mud bubbles:

beyond, a hot pond fills a steep ravine formed of red and yellow clay.

On the side of a hill two miles from Wairakei Spa, beyond the many-coloured springs, the Great Steam Hole rumbles in solitude. From the cavity only two feet in diameter, hot vapour breaks forth with a noise like the thunder of a waterfall, and with such force that smaller articles thrown into it are ejected.

The Oraki Korako Geyser-district.

(17 miles from Wairakei.)

The undulating downs from Wairakei to Oraki Korako are enclosed to the N. by several cone-shaped elevations. The landslips that may in many places be seen on the hill sides show that here too, as in the vicinity of Taupo, the upper crust of earth is composed of cinders and pumice stone. In the cuttings we find charred trunks of trees. Among the mounds composed of clay and volcanic cinders a ridge of lava, which is about on a level with the highest mound, rises into prominence. How could the lava have flowed in so thick a stream? And how were these cone-shaped elevations formed?

In New Zealand we are constantly busy with geological reflections, particularly here in this volcanic district of the North Island which has been exposed to rapid transformations.

Beside the road, which is sparsely overgrown with bushes and yellow clumps of grass of the appearance of brushwood, we find only the tents of the road-makers: near to the geyser district, in a tributary valley, a mill engaged in working up flax weed is the only sign of this part of the world being inhabited.

About 17 miles from Wairakei, on the left bank of the river Waikato, from a bend situated at a great height, we get a full view of the geyser district of Oraki Korako.

Here the geysers have built white terraces formed like shells on either bank: to-day the majority of them have become extinct, and even those still active content themselves with emitting a little boiling water, or, like the Oraki Korako geyser, with tossing up waves a few feet high.

Our Maori driver, who at the same time acts as guide in the Wairakei valley, proved to be a very useful



Geysers and hot springs on the banks of the Waikato,
near Oraki Korako.

and clever man, particularly in Oraki Korako, in the «Maori preservation», where a female compatriot of his acts as guide and exacts toll from passengers. The lady guide came with a suckling on her back, to inform us that she and her sister-in-law would row us over to the right bank of the Waikato: but our coachman, like a true cavalier, himself took the oars. At first he rowed up beside the bank, then plunged sideways with the boat into the rapid-

like current. We struggled through somehow; and with a few powerful strokes he landed us on the further bank. It was an excellent piece of work: but our good Maori was quite pumped out. We complimented his watermanship and advised him to enter for rowing contests: and we found that, if he did win a prize, it would not be the first!

The two greatest sights of the Oraki Korako district are the terrace 200 feet broad and 20—25 feet high, and



The silicate terrace of Oraki Korako.

the alum cave. The large silicate terrace is being continual added to by the overflows of the boiling bluewatered lake and other basins filled with hot water situate above it. From below, the bluish white sparkling deposit, with its perpendicular slope, looks like a waterfall in frosty weather.

The side walls of the alum cave are white at the bottom with alum; in other places they play in sparkling

green hues, Opposite the entrance we see a small blue-coloured hot spring: while at the entrance lofty fern-trees show green. These trees add a peculiar charm to the cave.

On our return from this excursion the Maori «sister-in-law» was awaiting us with a boiling kettle. We seized our picnic hamper und set to work to eat. Our waterman kept us company. The sandwiches were devoured by him by the dozen: and after sipping a few cups of tea he turned to a champagne bottle of lemonade, assuring us that his hard work had made his appetite keen, — I think this is all part and parcel of a Maori. After the lemonade has disappeared, he threw the bottle away, declaring with a dainty smile, that he had thrown away a penny.*

From Wairakei to Rotoroua.

(49 m.)

The Waiatopu Geyser-district.

On the way from Wairakei to Rotoroua we halted in the Waiatopu Valley, 27 m. distant. Here we do not see geysers playing: but we see plenty of boiling and hot springs and lakes, smoking cavities and sulphur caves. On the lime-white hill-side just opposite the hotel we find spacious cavities emitting fumes of sulphur: while all round the same there are abundant sulphur deposits. At the edges of the boiling water we see new formations in process of settling, at the openings of the cavities others in full blossom. Here too, as generally in similar districts, the ground in many places rings hollow under foot. This sound is ex-

* All along the coach-roads of New Zealand we find disbanded bottles at every turn. No one would think of picking them up, though any one who passed with a barrow might earn a few shillings in the nearest town. The fact is that the well-to-do islanders have no need of collecting bottles. In the Maoris it is not quite «second nature»: but they like to affect.

plained by a hole some few yards in diameter which fell in last year, and which leads into a spacious circular pit, from which latter fumes of sulphur rise in thick masses. It is probable that in time, when more of the surface falls in, an open cavity will be formed, like to the other deep holes gaping all around with their broken walls.

In Waiatopu, besides the sulphur deposits, there are many alum formations: e. g. one large and two smaller



Blue-watered hot lake feeding the terrace of Oraki Korako.

ponds are partly enclosed by white alum walls. The crumbling, yellowish white alum is in several places covered by a brownish yellow hard and shining crust.

The large, blue-watered Lake of Waiatopu wedged in between steep shores is the most beautiful lake of its kind in the New Zealand geyser districts. The overflow of one hot lake forms a broad waterfall, which, shaped like a shell, is of a shining yellowish hue from the sulphureous

deposits: in time this still primitive formation may develop into a pretty terrace. The same lake a little farther on forms another waterfall, not so broad but higher.

Near to the road leading from Waiatopu to Rotoroua, in a cone-shaped elevation, a mud geyser is active: in a few years this geyser has built for itself a hive-like crater. The crater has been formed on the side of the hill nearest



The Blue Lake in the Waiatopu Geyser-district, surronaded
by white alum walls.

the road: from the foot to the brink 11 wooden steps form the ascent. From the topmost step we can safely watch the mud volcano that is always boiling.

The diameter of the mouth of the crater must be from 6 to 7 yards across. The mud formation falls into a valley on the side opposite the steps, where at the foot there is a pool of clear water. Round about verdant manuka bushes may be seen.

Near Waiatapu is situated the convict prison. The undulating district stretching to Rotoroua, which is either quite barren or but thinly overgrown with shrubs, has been afforested in several places by the convicts. The trees give great promise: and in a few decades the whole district will greatly benefit from them.

The rainbow mountain is the most picturesque sight on the road leading to Rotoroua. This cone-shaped solitary



The Mud Volcano at Waiatapu.

volcano, long extinct, has two craters on the side near the road, the steep walls of which are for the most part of brick-red hue, interspersed here and there with yellow, white and brownish tints. At the foot of the hill, on the banks of a little dark green lake, even to day fumes are rising in one place; while on the opposite left-hand side of the road stretches another green lake. The north-western side of the rainbow mountain, that remote from the road, is still richer in colour.

Beyond the rainbow mountain, about 8 miles from Waia-topu, we see a land-slide that is a reminiscence of the volcanic earthquake of 1886: despite overgrowth and mud deposits, we are still able to clearly make out the slide, which took place between two parallel lines.

On emerging from a defile across the geyser district of Whakarewarewa with its clouds of vapour, we catch sight of Rotoroua, two miles away, in the basin of the



The crater of the Mud Volcano.

valley stretching beneath us. The background is supplied by Lake Rotoroua.*

On the broad highroad leading to Rotoroua there is a lively carriage and motor traffic. This is the most frequented district of the island colony.

* Lake Rotoroua is 32 square miles in area, and is situated 915 feet above the level of the sea.

Rotoroua: the Maori villages of Whakarewarewa (abbreviated Whaka) and Ohinemutu.

The hot baths of Rotoroua, owing to their extraordinary healing properties, are frequented not only by New Zealanders, but by sufferers from rheumatism from Australia and even from Europe. The buildings equipped with every modern requirement are situated in a fine park.



Maori kitchen in the village of Whaka.

The hot springs are inexhaustible: there are two of them in the park which spout out water like geysers. The spa contains, besides, hotels, shops dealing in Maori specialities, and hackney carriage undertakings. The competition between the latter is great: the advantage of this competition is fully appreciated by passengers from the South Island accustomed to the consequences of a monopoly of traffic.

On the way to the village of Whakarewarewa (abbreviated «Whaka»), two miles from Rotoroua, on the lefthand

side we find a large comfortable hotel, opposite which beside the tea-house, stands a Maori dwelling covered with carvings built for festive occasions: and beyond the same the little wooden dwelling-houses of the aborigines.

In the vicinity of the Maori dwellings, basins of hot and boiling water are giving off steam: while just between the first houses we see two geysers in full activity. These



Maggie Papakura, the favourite woman guide, before her house built in Maori style.

basins with their small openings and boiling water, are enclosed by the dark-skinned Maoris with laths, — and the kitchen is ready for use.

We visited the geyser valley of Whakarewarewa with pretty-eyed Maori women as guides. Of these the best known and the favourite of all is Maggie. This sympathetic clever person gives all the necessary explanations in the most unexceptionable English. From morn till even, she is

always in request, for all the tourists wish to have her as guide on their visits to Whaka. After the tramp was over, Maggie introduced us to the house where she receives. In the little Maori dwelling ornamented with carving, we find a book-case laden with English books, a writing desk, a cottage piano, and Maori specialties. The walls are decorated with portraits of celebrities, among others a photo-



The crater of the Pohutu geyser.

graph of the Prince of Wales walking among the geysers, with Maggie for his guide.

The geyser valley is in the immediate vicinity of the village, or rather I should say the geyser park, for the valley with its comfortable broad roads and its band stand wears the character of a park. The geysers in the park, which are now extinct, have built lofty mound-like terraces, on one of which the Pohutu geyser, which resumes activity

at uncertain intervals, is situate, while at the foot of the same the Kereru geyser, which resumes operations every 2—3 minutes, is building its dark house, — with a most peculiar colour effect. The mud geyser situate in the bed of a brook flowing below the Kereru shoots up water at intervals with a noise like an explosion, — for which reason it has been called the «torpedo». A few hundred yards



The official soaping of the Wairoa geyser on Easter Day, 1907.

farther on the Papakura geyser, called after the surname of Maggie, in a basin beside the brook incessantly bubbles and spouts its water up to a height of several feet.

The innumerable mud geysers compose groups of light, dark and red hues.

On March 30, I returned homewards from Waiatapu. As we drove from the last valley before you come to Rotoroua, the many-coloured panorama of the latter place

was made more lively by a mighty spout of water bathing in the sunlight: it was the Pohutu shooting up the boiling water it contains to a height of 60—80 feet. Later on I heard that the Pohutu was active three times on the 29th, and on the morning of the 30th as well, on all four occasions for a longer period.

At the foot of a lofty silicate mound, the Wairoa geyser has built its sponge-like crater. This geyser does



The upheaval of the Wairoa, after being soaped.

not break out of its own account: but a few pounds of soap thrown into its crater stirs it into motion; about 20—30 minutes after the soap has been thrown in, the geyser shoots up a fountain from 100 to 150 feet in height, to the great delight of the by-standers. The crater is protected against soaping under ordinary circumstances by a board full of tiny holes: on exceptional occasions, at an hour previously announced to the public, the work of

soaping is carried out with the due official apparatus. Such was the case on Easter Day.

In the geyser park the inhabitants of Rotoroua were assembled, composing picturesque groups on the various silicate terraces: for the most part they were in particularly good humour. «The Pohutu is in its Easter frame of mind», they all said: today was the third day of its activity, and, as far as could be foreseen, it would show its



The Waïora in full activity.

teeth during the afternoon, for the quadrangular crater beside it was in a terrible ferment, while on the other side boiling water bubbled up incessantly from a smaller crater. An odd fellow, this Pohutu, fond of experiments! In the quadrangular crater beside him there are generally a few feet of water; before it breaks out into activity, the contents of the basin rise higher and higher, then, as the water approaches the brink of the basin, it shoots up to

a height of several feet: then the Pohutu dashes up a mighty spout of water, and the little crater too keeps them company.

We waited for the Pohutu until 3. p. m.; then we took up our positions round the Wairoa, to watch the march of events from the soaping process to the moment of breaking out. At three o'clock the wooden cover of the steaming crater was taken off. Maggie stood beside the crater in a white dress and in the pink head-kerchief she was wont to wear, and from a little bag sprinkled soap into the belly of Wairoa. A number of professional and innumerable amateur photographers immortalised the scene. Then the photographers placed their cameras at a more respectful distance, in order to get a good general view of the outbreak: while the general public swarmed over the neighbouring mounds. Everybody is quite familiar already with the fact that the spout of the Wairoa always shoots up in the same line, and knows that until its activity commences we may safely stand on the edge. It took some time for the foaming water to rise to the brink of the basin. Once or twice the frothing liquid leaped up, then sank again, giving spectators the impression that the Wairoa was unwell.

When the spouts shot up, a few spectators started aside, causing general merriment: and finally all retired to a distance, for the Wairoa did its duty, throwing up columns of water to a height of 120—150 feet with a rumble that set the earth all round a-trembling. For a good minute it played with the high spout, then for some time threw up lower spouts of from 50—80 feet in height, then sank back, until finally, after an activity of half an hour, it ceased work altogether.

Some of the spectators continued to look on. I kept them company, pinning my faith on Pohutu, — and Pohutu did his duty! 1. the quadrangular basin overflowed, 2. the large spout of water rose, playing for several minutes with

considerable force, 3. beside it, the little spout played to a height of 10—15 feet without intermission.*

On Easter Monday, the Pohutu played for nearly five hours: but as I was absent on an excursion, I was unable to witness this activity of so exceptionally long duration.

During the three days' activity of the Pohutu, the Kereru geyser which is situate at the foot of the latter was only now and then active: but after the Pohutu had



Thatched Maori house in the village of Ohinemutu.

finally sunk to rest its returned to its ordinary course of procedure, i. e. it played as usual every 2 or 3 minutes. Consequently the Kereru is in connection with the Pohutu, which is situate above it.

The village of Ohinemutu, which lies on the shore of a lake, one mile distant from Rotoroua, is for the most

* The little spout always plays at the same time as the Pohutu: but the large basin often remains undisturbed, and in such cases, before the Pohutu breaks out, the boiling water in the basin sinks rapidly.

part inhabited by Maoris: here we still see primitive thatched Maori cottages, with old women smoking their pipes in the porches. In the vicinity of Ohinemutu the hot springs are so abundant that in certain creeks they are responsible for heating the water of Lake Rotoroua.

From time to time the natives give concerts and displays of dancing, — the favourite number of all their entertainments is the «poi» dance of the women. In the latter the women stand in a row, holding oval balls plaited of rushes and hanging on threads, in their hands; at a given signal they dash the «eggs» against their sides, their backs or their heads, to the accompaniment of dexterous and aesthetic movements. The «haka» of the men — i. e. their dance before going to battle —, which is accompanied by lolling of tongues, is somewhat grotesque. Both in the former and in the latter case, the keeping of correct time is most striking.

The Hamurana Spring and the Tikitere Geyser-district.

The various stage-carriage companies arrange tours from Rotoroua nearly every day. One of the favourite tours is an excursion round the lake, — 1) by boat from Rotoroua to the northern shore of the lake, 2) after 9 miles' sailing, a short walk, 3) at the bend of the brook Hamurana we enter boats, and soon reach the source of the same.

The shores of the lake are flanked by thick bushes: the crystal-clear water flows so smoothly, that the surface wears the appearance of a shining mirror, while below the same light and dark green and yellow water plants look like ornamental shrubs in a conservatory.

The waterman has a feeling for the beauties of nature, and knows the character of the brook; he rows slowly, almost imperceptibly, so as not to disturb the smooth mirror-like surface of the water. The tourists lean

out of the boat and gaze at the luxuriant garden beneath the surface. As they gaze thus in ecstasy, the boat unperceived comes to a standstill. We have reached the end of the world — «the shores overgrown with bushes meet and form a creek», — and to the source of the spring, — «below us, at a depth of 30 feet, there is a crater-like opening with rocky walls, from which the abundant water of the brook pours forth in inexhaustible quantities».



The denizens of the Fairy Spring.

The dense column of water breaks forth with such force that coins thrown into it do not fall to the bottom, but oscillate until they find a protected spot somewhere on the side, where they can then settle down in peace.*

* The «Fairy Spring» is also a favourite resort for excursionists from Rotoroua: here, in the crystal-clear water, the fish have increased enormously in numbers. As the above picture shows, I succeeded in immortalising a shoal of fish from a position on the branch of a tree.

4) After this pleasant boat outing we sail on, first along the shores, then on the outlet of Lake Rotoroua which leads into the Rotoiti (Little Roto), and continue to sail on the latter for a further 9 miles to the station of Okeri.

The shallow outlet, as it pours into Lake Rotoiti, suddenly assumes an unfathomable depth, a fact that we can discern quite easily from the ship's bows.

Above Okeri, the Lake Rotoiti forms a waterfall, which is partly used to drive the machinery for generating the electric power required for the lighting of Rotoroua.

5) From Okeri we proceed by coach to the Tikitere geyser district, seven miles distant on the N. E. shore of the lake. Amid the hot springs and pools of Tikitere, mud geysers are also sputtering. In a spot covered by shallow water, the boiling steam-bubbles which rise up hiss like fat boiling in innumerable saucepans. From the openings, crevices and caves all round, hot sulphur fumes are issuing forth: while crystallised yellow and brown sulphur is strewn in large quantities over the geyser district.

At Tikitere too we see a waterfall dashing down from a wall covered with silicate deposits: but the terrace here is far smaller than at Oraki Korako, and not so highly coloured.

The Waimangu Geyser; Lakes Rotomahana and Tarawera; the district of the blue and green lakes.

(39 miles' tour from Rotoroua.)

The so-called «Government Round Trip» is the favourite tour in the neighbourhood of Rotoroua, and it is undoubtedly the best from the tourist's point of view: 1) the passengers are taken by coach or twohorsed carriages from Rotoroua to the station of Waimangu, 17 miles distant. The carriage road for some distance corresponds to that leading towards Waiaatapu: the two roads diverge

just before a landslip caused by an earthquake. From this point we turn eastwards.*

Two miles out from Waimangu, the rainbow hill rises prominent among its neighbours, and, with its many-coloured sides, is a picturesque sight.

The station of Waimangu, situate at a height of 1550 feet, is under the control of the Government: the keeper of the comfortable hotel at the same time acts as guide.



The geyser-district of Waimangu, viewed from «Prospect Hill».

From «Prospect Hill» near the hotel, we get a splendid view of the whole Waimangu district. To the south we see the rainbow hill: below us, to the right, a deep crater with rocky sides, surrounded by bushes, with a dark green pool at the bottom; before us, from W. to E., stretch undulating ridges covered with grey volcanic cinders and

* The land-slip is more pronounced on the rising road leading towards Waimangu than on the way from Waitopu.

myriads of indentations caused by the flow of water; from the N. E. to the S. W., the connection is broken, — here, as far as Mount Tarawera beyond Lake Rotomahana, a long ravine divides the hills. This volcano (Tarawera) played the most important part in the volcanic eruption of 1886.

To prove the theory that volcanoes are situate on the weaker lines of the earth's crust, no better example could be offered by nature than this spot: at the same



Mountain ridges in the neighbourhood of the Waimangu geyser and of the volcanic mountain Tarawera, covered with volcanic cinders.

time there could be no better opportunity of investigating the results of volcanic activity than that afforded by the neighbourhood of Waimangu, where, on the broken steep slopes of old and recent craters, at every step we observe deposits of various periods, and where thermal activity is still in the state of fermentation.

2) On the road leading down from the hotel, we reach the bottom of a crater surrounded by extensive

walls which are in places lofty and steep. From the western side wall of the crater a rock broken vertically juts out, acting practically as the wall dividing off the second crater, in which the Waimangu geyser lies. Beyond we again see a crater, the higher «Inferno» with its boiling lake.

The bottom of the first and larger crater, near to a broken rocky wall, is porous and wears the appearance of a huge grate. The steam that forces its way through the innumerable small pores makes the inch or so of boiling water on the surface hiss with a noise that leads one to think all the saucepans in the island are being used at once to fry pancakes. By the side of the moderately warm water to be found near the overflow of the boiling spring, reed grass is growing.

From a cave-like opening in the broken rock, hot steam is pouring forth in frequent spouts.

The bottom of the crater of the Waimangu geyser is situate below that of the large crater, as is only natural, seeing that it was not till October 1905 that the former ceased its activity begun in 1901, whereas the other craters in the neighbourhood became extinct in 1886. The eastern crater wall of the Waimangu joins that of the large crater, and so the geyser practically composes a separate crater on the brink of the larger crater.

The high steep wall of the crater is composed of volcanic cinders and rubbish: the products of eruptions deposited here in layers offer a coloured picture of the various volcanic periods. E. g. the uppermost stratum is composed of a large heap of stones thrown there by the eruption of the Waimangu geyser; below it are ranged clumps of turf that have grown among the cinders of the eruption of 1886; under the line marking the track of the latter eruption which shows green on the steep sides, there follows another thick stratum, the boundary line of the last eruption previous to 1886. Deep down, near the foot of the

crater wall, we see a thick yellowish layer: this is probably the product of the primeval eruption of the rainbow hill.

The crater of the Waimangu* is 138 yards long, 86 yards broad, and 30 feet deep: it has been clogged with mud by the waterfall dripping down from the bottom of the large crater. The water runs down the opposite side of the geyser. At the overflow, a small steam-puffing hole throws the overflowing water up to a height of several feet, like a continuously active geyser.

3. Leaving Waimangu on the right, over a deep ravine, along a steep road we come to a little wooden house standing above the «Inferno», — this is the resting place.

I was so interested in everything I had seen that I did not proceed with the other tourists, but after due investigation returned to the Waimangu Hotel to think over it all.

In the evening I had an interesting conversation with Mr E . . . , the worthy guide, who is a passionate geologist. The experiments he has made with the geysers and other observations of his are very instructive, and would deserve to be noted down by an expert pen.

The next day only male tourists came from Rotoroua: so we took the less frequented route. This road leads over a steep shore above the geyser-crater, across the bridge spanning the boiling brook, to the lower side of the «Inferno».

On the occasion of the great eruption of 1886, the wind drove the cinders in a westerly direction: conse-

* The Waimangu is the most powerful geyser in the world. Properly speaking, it constitutes a transitional stage between volcano and geyser, in so far as it throws up, not only water and mud, but an admixture of stones too. The first eruption was observed in February, 1901. Very often for weeks it was quiet, then was active exactly every $4\frac{1}{2}$ hours, — e. g. in January and February, 1904. It threw up, very often to a height of 400—500 feet, a spout of water mixed with mud and stones. Its greatest eruption in the winter of 1903, was estimated at 1500 feet, and was photographed from a distance of about a quarter of a mile. The scale of the photograph proves how high and powerful the spout must have been.

quently, by the side of the less frequented road, i. e. on the eastern side, we find several large stones (The Waimangu has also helped to add to the stone heap). The stones are, almost without exception, sharp-edged: I did not see one bomb-shaped stone formed in a crater.

From the same road we get a near view of the steam hole working incessantly like a geyser at the overflow of the Waimangu.



«Steam-hole at the overflow of the Waimangu geyser».

4. Beyond the shelter standing above the «Inferno», in a N. E. direction, we find a crater with a small pool of water clogged with mud. On one side of the pool are verdant rushes; the other side is a smooth surface of water, on which last year there was a small eruption that has not been repeated since. The crater overgrown with bushes, with steep stone walls, that lies to the right of the crater containing the pool, was not active even in 1886.

In the ravine straight in front of us, that looks eastwards, two craters were in operation in 1886: even today steam bursts forth from its sides. Almost in a line with this crater-basin, which wears the appearance of a fissure, on the opposite shore of Lake Rotomahana, is the fissure $8\frac{1}{2}$ miles long of the volcano Tarawera.

The coloured wall of this fissure nearest Lake Roto-



The «Inferno» crater, near the Waimangu geyser.

mahana is covered with steam; our guide scratched the soft, mud-like upper layer of soil with his stick. «In this steam-impregnated crust of earth», he said, «in a week even granite becomes soft, as I have proved on several occasions by experiments».*

* Near the geysers may also be seen yellowish red, mud-like, steam-impregnated material, the effect of which, according to our guide, is precisely the same.

We reach the shores of Lake Rotomahana near the ravine cut by the hot brook. In its vicinity a steam hole pours forth hot vapour: and owing to the quick-sand nature of the soil it is unapproachable.

5. Where the brook flows in to the lake, a boat driven by benzine waits to take up tourists.

We now sail along the northern shore of the lake. From the steep shore boiling water pours down, and



The crater-lake of Rotomahana and, behind it, the volcano Tarawera.

columns of steam rise heavenwards. From the boiling hot water and steam the edge of the lake becomes so hot that we cannot dip even the tips of our fingers into it. So we reach the Huyar geyser, which is on a level with the surface of the water and incessantly active, by passing through a steam bath.

The Huyar geyser is really a large edition of the little steam hole operating at the overflow of the Waimangu: it is also engaged, not in shooting up water from its own

interior, but, standing partly under water, in blowing the water of the lake to a height of several feet.

The little boat puts in at the «Pink Terrace» several stories high, which was world-famed before the eruption of 1886. Among the ruins of the terrace, which has been deprived of its ornamental beauty, even today hot water bubbles forth on every side.

6. After a cruise of 3 miles, we land at a broad ravine connecting Lake Rotomahama* with Lake Tarawera to the West. To the right we see the fissured sides of Mount Tarawera, and beside the same a parasite crater.

The broad ravine connecting the two lakes is covered with a black mass like lava cinders but heavier.

All along the banks of Lake Tarawera, we are struck by the appearance of a water-line far above the present level. This mark shows the level of the water two years ago, since which time there must have been a sinking of the bottom.

From Lake Tarawera we get an excellent view of the mountain of the same name. The top of the hill is formed like a crooked ridge: its broken lines covered with cinders and ashes are undulating.

On the dry sunny day, from the centre of the lake we were able clearly to make out a column of steam** rising from White Island situated 60—70 miles to the N. E.

* Before the great eruption of Tarawera in 1886, Lake Rotomahama was shallow and occupied an area of 200 acres only: on the occasion of the said eruption, it helped the craters in the vicinity in their work of destruction, exterminating the world-famed white and pink terrace; and today it is $5\frac{1}{4}$ miles long, $2\frac{1}{2}$ miles broad, and about 5000 acres in area. Its greatest depth is 420 feet, and its level is 70 feet higher than it was previous to the eruption.

** Before the eruption, in 1886, of Tarawera and the neighbouring craters, premonitory signs appeared on White Island, then in a solfatara state: similar warning signs were observed in various parts of the «thermal district» stretching some 150 miles S. W. from the said Island. This volcanic region 150 miles in length and 10—20 miles in breadth should be visited by every student of volcanism.

7. After a further cruise of 7 miles, we landed at the station of Waiora. All along the road leading to the station; at the side of the cutting, obsidian rocks peep forth, — they are the memorial stones of the pre-historic eruption.

The tour, which was particularly varied in character, came to a conclusion with a drive of 11 miles from Waiora to Rotoroua. The finest part of the drive was the panorama offered by the two-coloured lake district, — the olive green Rotokahi and the blue Tikitapu lakes standing one beside the other, divided only by a narrow hill. Both lakes are surrounded by similar vegetation: the contrasting colour of the two surfaces in the midst of uniform surroundings makes a charming picture.

The lakes are succeeded by a district overgrown with bush. Scarcely are we out of the bush, when the road passes a striking ditch-like fissure, 4 miles long, which was also brought into being by the volcanic activity of 1886.

The stalactite caves of Waitomo and Ruakuri.

I left Rotoroua on the morning of April 6th, by the so-called «express» which runs to Auckland every day. Passing through bush and then through thinly populated pasture-lands and marshy ground, we arrived at the station of Frankton, 87 miles to the N. W.: here passengers proceeding to the cave change and take the train for Taumaranui, a village situated to the S., beside the river Wanganui.

From Frankton to Hangatiki, the nearest station to the cave of Waitomo, the journey is very disagreeable. The slow train stops frequently, while in the carriages we are obliged to share the dusty, smoky atmosphere with human creatures reeling from the effects of an overdose of whisky. In this part of the country travelling of this character is quite traditional. The explanation of this state of affairs is: — the station of Tī Avamutu, which lies to

the S. of Frankton, is the northern boundary of the «King's Country», in which, for a length of about 70 miles (from E. to W.), from Ti Aramutu southwards to Pipiriki, the retail of liquors is forbidden. The inhabitants of this prohibited district may only import as much spirituous liquor as they can place under the carriage seat as hand luggage. As the quantity is a minimum one, they supplement it by



Hill-crater overgrown with grass, near the town of Auckland.

getting drunk before starting. The friendship of the tipsy white and brown skinned individuals is quite a frenzied one. It is a good thing that even in this state both the Englishmen and the Maoris preserve their *sang froid*: otherwise it would not be advisable for anyone to travel south from Frankton without a bodyguard.

After a drive of 6 hours from Hangatiki, we reached the Waitomo Hotel. The red clayey soil seems fertile: but,

owing to the opposition of the native inhabitants, the district was very late in getting a railway, as a consequence of which fact we only see farms here and there, for the most part pastures, — in other places large stretches of country are still covered by primeval forests.

The Waitomo Tourist Hotel is under Government control. About half a mile from the hotel lies the Waitomo Cave, and, a mile and a half further on, the Ruakuri Cave, in both of which we find stalactite formations. In the Ruakuri Cave the transparent alabaster-white stalactites are in the state of development, and form small grottoes: the stalactites of the Waitomo Cave are larger, but the white lime-like groups of stalactites, for the most part completely developed, have lost the alabaster brilliance.

The river Waitomo flows through both caves: in the Ruakuri Cave, in two places we see the river, wedged in between the sand-stone walls, rushing down a tunnel-like passage. Of the beds no longer in use, in one place two have formed a couple of stories one above the other: while in the Waitomo Cave, the slowly flowing river develops into a kind of lake with a smooth surface.

In the sand-stone sides there are numerous shells and conchs. The arched roof of the line broken by the flow of water is covered with tiny phosphorescent caterpillars, in such quantities that in the dark they make the arch look like the starry firmament. The bluish coloured shining mass of caterpillars is studded here and there with a few more brilliant individual lights that seem to represent the planets. The bluish light is reflected by the mirror-like surface of the Waitomo, and is brilliant enough to guide our steps for a few yards.

I visited one of the caves by daylight, the other at night: in both cases the shining brilliance of the starry vault was of equal power.

The caterpillars spin thin cobweb-like threads from the vault. I did not see one of the caterpillars hanging on

these threads which descend vertically. From a distance the light of candles does not disturb them: but when the candles approach nearer, some of them cease their work of illumination.

Auckland.

The primeval crater-hills. The extinct volcano of Rangitoto.

After a railway journey of 113 m. from Waitomo, I arrived at Auckland. On the marshy territory flanking the line, rushes grow; the more elevated spots are used as pasture-lands; towards the North we find an ever developing economic activity.

The solitary hills which are strikingly numerous in the vicinity of Auckland, the grey stones studded over the bright green fields, and the lava walls to be seen at the cuttings, — all remind us of the whilom volcanic period. One of the many hills, Mount Eden (644 feet in height) situate quite close to Auckland, lengthens out on the town side in the form of a ridge, while on the opposite side it wears the shape of a regular cone. An easy carriage road leads up the side of the hill to the round crater at the top, now overgrown with grass, from where we can enjoy a splendid view of the harbour of Auckland, a town built on undulating territory, enclosed, by fjord-like bays and islands; and on the opposite side we have the lovely panorama of the port of Onehuga with its many-coloured suburbs scattered all over bright green fields.

From the same spot (Mount Eden) we get the best view of the other mound-shaped extinct volcanoes, and, on the sea side, of the extinct volcano of Rangitoto with its triple cone peaks.

On the sides of Mount Eden and of the other hills of volcanic origin, in ravines and crevices, we see thick

deposits of shells and conchs. I had made up my mind that these hills, after becoming extinct, had sunk below the level of the sea, when in some books dealing with the matter I read that the shells had been strewn by the Maoris who lived for a long time here in fortified positions (Pâ).

Mount Rangitoto is an island standing by itself. The centre of this island is occupied by the cinder cone of the



The enormous «bomb» preserved in the Auckland Museum.

extinct volcano, which is 960 feet in height. The crater of the cone, which is partly overgrown with grass, reminds one of the crater of Mount Eden. The edge of the crater wall is composed of brick-red, burned out, cinder-like stones: while, beneath the cinder cone, the island has been formed all round of lava. The latter, which has flowed in several streams, composes ridges towering like flocs of ice. On the vegetable mould filling the fissures and crevices of

the lava stratum, rata and other shrubs producing flowers of a similar kind, are growing.

Among the large volcanic «bombs» from the vicinity to be found in the Auckland Museum, there is an enormous tongue-shaped one, which is said to be the largest bomb of similar origin in the world. In its thickest part, it is more than a foot in diameter: and its length all over is $4\frac{3}{4}$ feet.

Auckland, a town of 68,000 inhabitants, is the second most bustling commercial centre in New Zealand.

New Plymouth.

(135 m. from Auckland.)

The Egmont volcano.

From Auckland I made an excursion to the town of New Plymouth situate to the S. Our boat arrived in the harbour early in the morning. We woke up at dawn to a clear and cloudless sky. The first ray of the sun fell upon the cone of Mount Egmont, a hill in the distance 8200 feet high. It was the only prominent regularly formed hill on the plain, and reminded me of Etna, though its cone is more pointed on the top. Now only the icefield filling its crater shines white: otherwise it is grey and dignified.

Near the harbour two sugarloaf elevations attracted our attention: one stands on the coast, the other constitutes an island.

After breakfast I started to drive to Mount Egmont. On a stretch of territory 17 miles long leading up to the foot of the hill, we see excellent pasture farms. The milk is made into butter by factories in the neighbourhood.

Near to the foot of the hill, in a forest partly burned out, a saw-mill is engaged in cutting up the wood material of which any use can be made.

By the side of the road there are large quantities of brown and white miner birds, which are larger than starlings, chatter in a friendly manner, and live on insects, though they do not disdain to feed on fruit as well. In the latter respect they cannot enjoy themselves to the full, as there are few fruit-trees in the vicinity of New Plymouth.



The volcanic Mount Egmont, near New Plymouth.

After a 17 miles' drive we reached the foot of Mount Egmont. The toll-gate is here under lock and key, as the primeval forest stretching from the foot of the hill is Treasury property. In this spot trees 8—10 feet in diameter are not rare: and the vegetation is particularly luxuriant. Bryony has grown thickly on the trunks, shooting out subsidiary branches at the sides: trees thrown down root and all live on, and on their trunks the bran-

ches spring out like so many new trees: the surface of the ground is thickly overgrown with ferns and shrubs.

When we halted on the reddish brown muddy road leading to the mount, from the many-branched thickly foliated trees in every direction we heard the songs of birds, particularly the pleasing notes of the *tui* (*prothemadera novoe zeal.*) while the bronze-coloured whitebacked New Zealand



Glimpse of the primeval forest at the foot of Mount Egmont.

dove (*carpophaga novoe zeal.*), which is larger than the ringdove, flew from tree to tree with a loud rustling of wings.

The tourists' house is situate at a height of over 3200 feet. The comparatively small gradient is reflected in a lively manner by the vegetation. The forest consisting of trees of a similar species all through, diminishes in size at every step, but is luxuriant in growth.

The cuttings higher up show a gradual increase in the thickness of the cinder and rapilli strata. The bulk of

the rapilli strata are a sharply broken, heavy stone: but in places we find a stratum of light pumice stone too.

The coast at New Plymouth for some distance consists of black sand hills: the sand contains a large proportion of iron, a fact of which the use of a magnet at once convinces us. After painful endeavours lasting for many years, a company has at last been formed, which makes a profitable business of the working up of the iron found in this way. Steel made from the iron produced from this black sand seems to be of a very good quality.

Near the black sandhills a naphtha well is at work. The well was bored long ago: it is said to be very rich and to bring the oil to the surface without the aid of machinery. The scanty traffic, the small capital invested, the scarcity of labour, the grave state of the conditions of wages, and the distance of the markets must all be responsible for the fact that the well is not properly exploited. Now and then, when a larger supply is needed, the tap is opened: and then the plentiful spring is said to burst forth with the noise of thunder. As I was anxious to hear the rumble of this thunder, I asked the engineer to open the tap: but, referring to the rules, which provide that the tap shall be opened in the presence of the manager only, he was obliged to refuse my request, as the manager was not at hand. So I was deprived of hearing the thunder of the New Plymouth naphtha spring.

In the vicinity several springs are being bored, in true New Zealand style, — slowly, with a scanty supply of expensive labour. In this way it will require years to prove whether it is worth while to build an oilrefining factory on the model of those of Baku (in the Caucasus) for the local refinement of the raw naphtha products of New Plymouth.

From New Plymouth I took ship back to Auckland.

Besides the «Mariposa», which runs once a month no other steamer frequents these waters; on the 9th, 10th and 11th we met cargo sailing vessels, on their way to Hawaii to take up loads of sugar.

On the first few days the animal world was represented by a small species of gray gull: on the last three days by a larger species of the same. The smaller gulls were constantly in our way during the first seven days, and on the sixth day we crossed the spot where the 9° 30' latitude N. meets the 135° 30' longitude W., where according to marine charts, in a circle 2520 sea miles in diameter, not a single rock rises above the surface of the ocean.*

At such a distance from shore, on the huge ocean free from all the influences of dry land, meteorologists have an opportunity of thoroughly studying aerodynamics at sea. Now too, with almost mathematical accuracy, we got a S. E. wind that accompanied us nearly to the Equator; just before we got to the latter, we had a taste of rain; at the Equator we felt a cooling of the air-current due to the meeting of two contrary winds; then above the Equator, in latitude 1° N., rain again made its appearance, and so we passed into the region of the N. E. wind.

Above the 25th latitude N. the N. W. wind is the one generally in force (continental influence).**

* According to the maps, the above-mentioned circle is bounded on the W. by the Hawaii and Christmas Islands (American Protectorate), to the S. by the French Marquesas, to the E. by the Mexican Santa Rosa and Revilla Islands: to the N. the imaginary circle does not touch dry land.

** Both the S. E. winds in the Southern Pacific and the N. E. winds in the Northern Pacific, as well as the N. W. winds blowing on the latter, are called «trade winds». They are so called, because the routes of commercial sailing vessels are appointed in accordance with the directions of these ocean currents of air, which have been known from time immemorial.

San Francisco.

The U. S. A. disturbed state of public order in San Francisco.

As we approached San Francisco, a favourite topic was the exaggeration of the Americans. One of my fellow-passengers, a New Yorker, carried on a witty discussion with another American from Boston: wherever he could find occasion to do so, he treated him to the finest and best expressions, creating no small amusement with his telling remarks. On one occasion the talk was of San Francisco. «Is it true», I asked, «that the destruction in San Francisco was so terrible?» «Most terrific», answered Boston. «Most magnificent», retorted New York: «the most majestic ruin that of San Francisco, without a parallel in the history of the world. Why, a poem has been written about it, and achieved an enormous success in one of the San Francisco theatres.» He produced the poem. There was no doubt about it: the Yankee poet does describe the ruins as majestic, ruins such as surpass all others to be found anywhere in the world. I have only one remark to make on this point, viz: that one dilapidated wall of Rome possesses more historical value than half the ruined city of Francisco. The ruins of the latter are the remains of the most miserable architecture: not one single well-built wall, only the fragments of bent iron girders, iron pipes, and thin-walled «sky-scrapers». This is all that has remained! The slender-walled ten-storied houses standing half burned amid the ruins and the granaries now building of similar construction impress one with the idea that, in default of support, they must fall to pieces.

The villa (suburban) district has been left undamaged: here and in the streets of jerry-built wooden houses, I suddenly found myself face to face with American life. Over the broad macadam pavements the motor cars race

after each other: and everybody is in a hurry. Everything is in a fever: every tenth man, an incarnation of neurasthenia, is chewing rubber; and every second man has a cigar in his mouth.

Even 14 years ago, when I rushed from one end of North America to the other, I remarked a certain difference in the customs of California and the other parts of America, — as is only natural, seeing that in California far more foreign elements have mingled with the English race, who constitute the bulk of the population, than in Central and Eastern America: today we notice a complete upheaval, which is said to have taken its origin from the great fire.

What reason can be given for this development? . . . I will attempt an explanation. The newly-building city, in its need of labour for rapid construction, was not particular in its choice of elements; the labourer class — the bad, international, communist element — has continually gained in influence, and today the state of things is as follows, — with strikes always ready to interfere, work is continually stopped, either in one place or another. The better elements who are ready to work, are terrorised by threats and assaults, and energetic reprisals — which where necessary should be carried out by armed force — required for the maintenance of order, are quite neglected. What kind of system is this, I ask, which treats the elements threatening public safety so tenderly? . . . Capitalists are already afraid to indulge in enterprises at San Francisco. Then why this feverish building? The only effect will be that the downfall will be all the greater when the crisis takes place that is unavoidable unless there is a radical change of conditions.

The disorder and want of discipline affects every branch of trade. Even the most superficial observer must in the first moment be struck by the absolute upheaval of public order. Travellers are taken in and robbed at every

step: and in fact, — as was the case when the employes of the electric tramways struck* —, may quite unexpectedly find their lives in danger, without any hope of having the guilty men punished.

The police are quite helpless, for they do not possess sufficient authority to enable them to restore public order in such cases: while some of them are actually accomplices of the communist elements. So in America, the much boasted republic, an «act of God» similar to that of the great fire of San Francisco, is quite enough to cause an upheaval of public order that may last for a considerable time. Perhaps an exaggerated democratism and its concomitant, a desire for popularity, is responsible for the extremely enervated conceptions and system of punishment? The gallows and execution by court martial would soon produce a change: but if an elected officer of the city presumed to suggest that order must be made by hook or by crook, by radical measures of this kind, I know that the governing masses would throw him out at the next elections. That the «man in the street» would not risk losing a position gained without excessive education (a position which is very lucrative), after having tasted the fruits of popularity and many other things, is only natural and explains a good deal.

* During the strike of the employes of the electric tramways in May, the strikers fired with ball cartridges at their fellows who were working the cars: yet the military did not use their rifles. Of course volunteers have in such cases to be treated with delicacy, as they might easily refuse to turn out, etc.

CHAPTER VII.

THE HAWAIIAN ISLANDS.

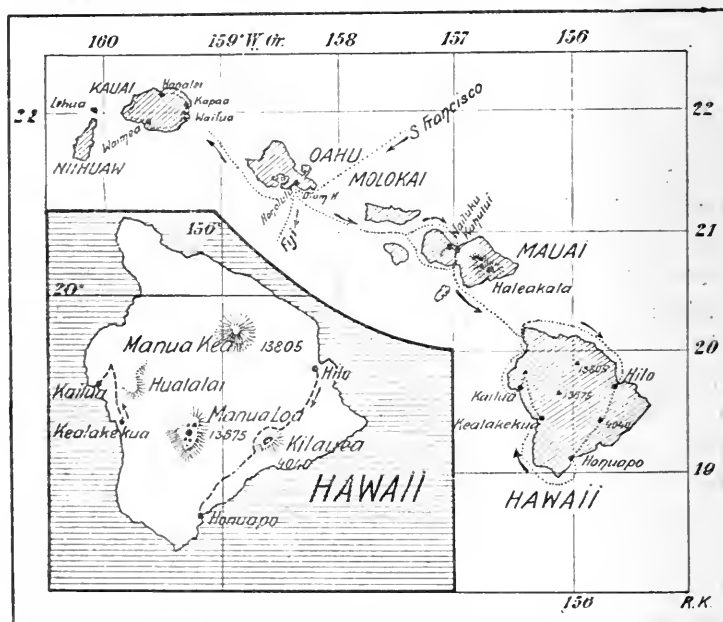
Short general description.

The Hawaiian group of islands, which is of volcanic origin, stretches from the S. E. to the N. W., between latitudes $18^{\circ} 50'$ and $23^{\circ} 05' N.$, and longitudes $154^{\circ} 40'$ and $161^{\circ} 50' W.$ It consists of eight large and several smaller islands, — of the eight main islands, 7 are inhabited. The aggregate area of the whole group is 6460 sq. miles: — the one lying most to the S. (Hawaii) comprises 4015, Maui, to the N. W. of the same, 728, Molokai, which follows higher up, 261, Oahu, 598, Kauai, 547, the other three important islands (Lanai and Kahoolawe, situate to the S. of Maui and Molokai, and Niihau, to the W. of Kauai) altogether 290, and the smaller islands and eyots altogether 6 sq. miles.

The climate of the Hawaiian group, under the influence of the cold ocean stream flowing back from the Behring Straits, and of the trade winds (N. E.) which are almost permanently in force, is more moderate than might be expected in a similar latitude. The eastern shores and a considerable part of the island of Hawaii receive more rain than the western side: consequently the eastern shores are richer in trees and more fertile than the western.*

* The enormous difference between the respective rainfalls of the two shores is shown by the official meteorological observations, according to which, between July 1905 and July 1906, the average rainfall of the islands was 17.47 inches, whereas at the 19 meteorological stations on the island of Hawaii the annual rainfall varied between 27.46

According to the Census of 1900, the aggregate population of the islands was 154,000 of which number 46,843 fell to Hawaii, 24,997 to Maui, 58,504 to Oahu, 20,502 to Kauai, and 3295 to the islands of Molokai, Lanai and Niihau combined. The population is very mixed, the bulk being Japanese. In 1884 there were only 114 Japanese living in the Hawaiian group: by 1900, their number had



The Hawaiian group of islands.

risen to 61,115. The other races are distributed as follows: — 37,636 natives and half-breeds, 25,762 Chinese, 15,675

and 167·48 inches (e. g. in the vicinity of Kaumana it was 167·48, in that of Hilo, 120·13), at 8 stations on the island of Maui it varied between 20·77 and 165·22 inches (at Lower Nahiku 155·22) etc. On the island of Oahu there are 15, on the island of Kauai, 6 stations: in the vicinity of the Nuuanu Water Works on the island of Oahu, the maximum for that year was 136·59, on the island of Kauai, in the neighbourhood of Koloa, 28·40 inches.

Portuguese, 7283 Americans and other whites born on the Hawaiian islands; then, in order of numerical strength, Norwegians, Englishmen, Germans, and people of other nationality. I found even a well-to-do Hungarian on the island of Kauai, who, for want of practice, was not quite master of his native tongue, but whose feelings still bind him by ties of deep affection to the native country he left so long ago.

The American labourers living in this island world detest the Japanese, and do not treat even the Chinese fairly, regarding the world as they do only from the standpoint of competition and wages. If they succeed in exterminating their rivals, maybe they will jeopardise the only really great trade of the islands, the production of sugar. And the Chinese are honest, trustworthy, and peaceful, and do good work: they are a great advantage to the commercial world of the Hawaiian islands.*

The native «Kanakas» of Hawaii, like the aborigines of New Zealand, and of the Cook and Society Islands, belong to the Polynesian race.**

The natives of Hawaii have very musical ears and are talented musicians; some of their old songs, scored

* I had occasion in many island countries, among the most varied conditions, to observe the behaviour of the Chinese. They do their duty everywhere. They obey the word of the «master» and are not yet saturated with the tenets of modern liberty and communism When I consider that the day will come soon when every white man will be the slave of «letters», when the use of spade and hoe will be beneath the dignity of the Caucasian race with its awful ideals of liberty, I seem to see the industrious Chinese working for the idling European As long as the Chinese wear pigtails, bread enough will be produced; the danger of famine will not threaten us until the Chinese too are saturated with the principles of modern liberty.

** The ethnographers have already come to the conclusion that the original home of the Polynesians dwelling on islands scattered over an area of nearly 4000 sea miles, was the Mikronesian, Philippine and Madagascar Islands, and the Malay Peninsula. The last central point of emigration is supposed to have been the island of Sawaii (Samoa).

by musical experts, are sung by everybody, and are very similar in point of time to European ones. The native orchestras, consisting of 5—6 musicians are, on the Italian model, supplied with guitars and string instruments, and play and sing the airs in turn.

Notwithstanding the mixed nature of the population, the system of education is highly developed. The English language is an obligatory subject; the children must attend school between the ages of 6 and 15; and the public (elementary) schools provide instruction gratis. Pupils may here receive the preparation necessary for admission to the American Colleges. The principal school is the «High School» of Hawaii.*

On the very fertile soil of the islands of Hawaii, Maui, Oahu, and Kauai, sugar cane, rice, more recently coffee, pineapples and tropical fruits are grown. 46 sugar plantations on the islands in question have factories of their own, besides which two independent factories are working. Only 5 sugar plantations have no factory of their own. With few exceptions, the plantations and factories are the property of companies possessed of large capitals. On the fields and in the factories altogether 44,949 hands are employed. Since 1903, the aggregate annual production has averaged 400,000 tons: the market for the raw sugar is North America, where it is refined. In these islands the only refinery at work is in Honolulu.

Consequently the Hawaiian Islands, which not very

* According to the official statements, 17,518 pupils attend the public and private schools; of these 4903 are Hawaiian «Kanakas», 4124 Portuguese, 596 Porto-Ricoans, 98 Scandinavians, 1993 Japanese, 1395 Chinese, and 151 foreigners of various other nationalities. The list of teachers employed — arranged according to nationalities — is of peculiar interest: of the total number (609) engaged in public and private schools, 75 are «Kanakas», 70 halfbreeds, 329 Americans, 56 Englishmen, 11 Germans, 23 Portuguese, 15 Scandinavians, 3 Belgians, 10 Frenchmen, 5 Japanese, 6 Chinese, and 2 of other nationality. Truly a motley crowd!

long ago were entirely excluded from international trade, have, in consequence of the introduction of abundant capital and of enterprise, already succeeded in occupying a position of the first importance in commerce. They are also well inside the route of passenger ships: vessels running from San Francisco or Vancouver to Sydney, Hongkong or Yokohama, all touch at Honolulu, the Capital of the Islands; besides, there is a regular service of boats between Honolulu and San Francisco.

Until 1894, the islands were an independent kingdom. In that year a republic was formed, with the exclusion of Queen Lilinokalani, and the protectorate of America accepted. In 1898 they were finally annexed to America. The plenipotentiary representative of the United States, the Governor appointed every four years by the President, resides at Honolulu. All the islands together send one delegate to Washington: the present delegate is Jonah K. Kālianāʻanaʻole, a native.

The late Queen Lilinokalani lives at Honolulu: but he often pays visits to the United States too.

Honolulu.

(2100 s. m. from San Francisco.)

The Diamond Head and Punch Bowl Craters.

The early sun's rays broke dimly through drizzling rain, and started into existence a double rainbow to the West. To the left the island of Molokai fading away into the ocean, the mournful home of the lepers: to the right an island mountain looming larger every moment, — this latter the island of Oahu with the pretty town of Honolulu. Both islands were wreathed with the azure blue of the sky The blue firmament peeping forth among the shreds of clouds with its warm smile tempted the glittering golden sunrays to appear: and the clouds flew away,

as fly the birds, the butterflies, or thoughts . . . I felt that under ordinary circumstances a dull day was impossible, — even the densest clouds could not resist for long the warm rays of the Honolulu sun. The words were on my lips when a lady sitting beside me, who was an enthusiastic admirer of Honolulu, interrupted and interpreted my thoughts for me.



The Diamond Head Crater, near Honolulu.

The S. W. corner of Oahu, 6 miles before we reach Honolulu, is occupied by the Diamond Head, a primeval crater 761 feet high. The crater, with its flattened cone, could best be compared to a tree trunk widening enormously at the roots, petrified, and broken off near the foot. This broken hill, which, in proportion to its breadth, is stumpy and seems to have been disfigured by main force, juts out at the corner of the island like some protecting bastion.

The Punch Bowl crater (498 feet), which forms the back ground of Honolulu, juts out similarly on the shores of the island in the form of a bastion. Leaving the two craters on our right we sail into the harbour of Honolulu. The ships enter the harbour by a long deep channel marked by buoys during the daytime, and by lamps at night, — a precaution rendered necessary by the shallow water all round.

In the harbour we found three large steamers and several smaller ones. When we came to anchor, the ship was surrounded by brown-skinned boys swimming about like fish. These juvenile swimmers were the best representatives of the aboriginal inhabitants. On the way to the town, we met such a motley crowd, that I could scarcely imagine I had landed on a Polynesian island.

In the inner town some of the houses are built of stone; the average height is 2—3 stories, though there are some of 5 stories, among others the Alexander Young Hotel, which occupies a triangular site. This Hotel can vie with the most luxurious hotels in America. The *al fresco* garden locality on the fourth floor is capable of seating 2500 persons. In the town, the Hawaiian Hotel, with its several wing buildings, enjoys an excellent reputation. In the watering place some 3 miles distant on the coast, the leading hotel is the Moana, besides which there are 3 other very good hotels. So in Honolulu, with its 40,000 inhabitants, there is no lack of good hotels.

The Hawaiian Promotion Committee existing under the control of the various big commercial houses takes the place of a tourist office, i. e. it does practically the same work as the Tourist Office in New Zealand. All information concerning travelling in the islands is given gratis; and tickets at reduced fares for a tour in the vicinity of the Kilauea volcano are issued. The first thing I did was to go to the Promotion Committee, to find out the timetable of the local steamboat service and to settle my arrange-

ments for a visit to the other islands. The office drew up a plan for me, and ordered horses and a guide by wireless telegraphy: even in Europe no greater foresight could be shown by anyone before undertaking a journey.

The thing that surprised me most was the wireless telegram, — the five main islands of the Hawaiian group are connected by wireless telegraphy!

After my plan of operations had been made out, I drove up to the Punch Bowl, a hill that stretches down to the suburbs of the town. The carriage road leads through the town, a part of the villa quarter and the quarter inhabited by the Portuguese. What a mixed population! The shops are for the most part in the hands of Chinese, Americans, and Japanese: the Portuguese are very fond of the barber's trade. The public frequenting the streets is an even more motley one! The Chinese wear pigtails; the Japanese women are seen in coloured Japanese robes, with wooden shoes; the native women hang wreaths of flowers round their necks; while the «Kanaka» (as the men are called here) also decorate their hats with flowers. The descriptions of the place of some years ago would not enable you to recognise Honolulu. The native customs have been overwhelmed by American «greed of gold», a rise in prices, the Chinese pigtail and the Japanese wooden shoes.

Nature however is more uniform, more harmonious. All along the villas that flank the main streets, we see a glory of flowers stretching for miles. Plants imported from tropic regions here produce more beautiful and fresher blossoms than in their native soil. And then the extraordinary variety of the flora, the mingling of colours, and the luxuriance of the same is a matter that has long been sung by the historians of Honolulu.

The trees are so laden with blossoms, that an ordinary garden could be planted quite full with the corolla of one tree: and the air is balmy with the perfume of

flowers. It was on a flower-bedecked road of this kind that I drove to the foot of the Punch Bowl. Here there was an end to the glory of gardens: even now the vegetation fights shy of the old flattened crater, — a fact which however is to the advantage of the general prospect, for the elevation formed like the Diamond Head is thus enabled to stand out in relief all the more monumental as the background of the coloured landscape all round.

From the sharp contour of the crater, I had expected to see a deep cavity: and in its place I beheld a valley overgrown with trees and bushes.

With its steep crater, the walls of which are overgrown with grass, the Diamond Head suggests its origin in a far more striking manner. The sides both of the Diamond Head and of the Punch Bowl are covered with a sand-like, brittle material, in addition to a crust of lava. In the latter I found pieces of coral too, — not at the foot of the hill, but on the sides.

The terminus of the electric railway from Honolulu to alongside the seaside resort is quite close to the Diamond Head; and of an afternoon this is the most frequented road. The road from Honolulu to the terminus passes gardens and villas: at one point the line leaves the rows of villas and cuts through the Chinese kitchen and fruit gardens. In the gardens, which are intersected in all directions by drainage, may be seen swarms of ducks, the domestic fowls which were created with the Chinese.

The Honolulu Aquarium and Museum.

The road leading from the seaside resort to the Diamond Head passes the Aquarium, which is situated among the villas. There is no collection of fish in the world of greater variety of colour. One would think the branchipoda swimming in the tanks were not fish at all but butterflies or flowers endowed with fins. Besides the

pink, red, and blue specimens, we see species playing in all colours of the rainbow, some with the brilliant hue of red cockatoos, others with the colour of green parrots. Their form is not even like that of ordinary fish: the disproportionately large head of one is like the nose of a ram; others are armed with a snout or horn-like protuberance similar to that of the ant-eater; while others have fins on their backs that look like feathers on their quadrangular bodies.

Besides the extraordinary wealth of colour, the chief distinguishing features of these fish are, in the case of most of the species, a comparatively small mouth and a fin on their tails that lies almost flat. The unusual shape of the bodies, the extraordinary mouth, eyes and fins lend the little fish a humorous appearance: and, as if conscious of the fact, they indulge in the maddest pranks, swimming and splashing about to their heart's content. Even the two octopuses are not so drowsy as in other aquariums: they too move up and down, gaze at the on-lookers, and are warmed by the water of the Hawaiian sea and the rays of the Hawaiian sun. But visitors do not take over-much notice of them, for they do not somehow fit into that many-coloured company: they ought to be outside, where a young shark 5—6 feet long has actually been placed.

One of the most attractive collections of the splendidly arranged Museum of Honolulu, is the group of imitation fish made of clay. Of the 500 odd kinds of fish to be found in the vicinity of the islands, only about 200 are represented here, though the models and the colouring are so perfect that one would think they had just been taken out of the tanks of the Aquarium. A master-workman is specially engaged by the Museum to cast the models: and the work he does is truly artistic.

Another extensive collection is that of shells and conchs. The various species of corals living among the islands of the Hawaiian sea and the Southern Pacific are

all represented here by fine preparations. In the ethnographical section, the grouped collection of the southern islands, — arranged by islands — would hold its own among the best collections of the kind.

The Museum publishes well illustrated works: that descriptive of the fish living in the Pacific is now in the press. If the coloured illustrations in this book are as successful as the coloured clay models, the library of every museum in the world ought to procure it, and it ought to be placed among the *albums de luxe* of every drawing-room.

Excursions from Honolulu.

The Pali. The Haleiwa Hotel.

The background of Honolulu consists of the Nuuanu valley and the ridges that run parallel with the same down to the sea. The trade wind which almost incessantly blows along the east coast of the island, supplies the Capital with fresh, cool air, through the channel of the Nuuanu valley. In sunny weather, a drive up the valley is one of the best excursions in the neighbourhood of Honolulu. We pass rows of villas succeeded by kitchen gardens and dairy farms: then the inhabited district is followed by a tract of eternal rains, overgrown with bushes and grass.

The three large open reservoirs used in connection with the water supply are also on this road: the water comes from a brook that flows into a lava basin, which brook takes its source from a waterfall to be seen on the hill-side.

The two ridges that form the valley are at first quite, bare. All along the road, above the lower stratum of lava we find a layer of red crumbled clay. The valley ends in the form of a crater, with an outlet in the middle, by the side of which stands the steep Pali rock of the form of a

sugar-loaf. The carriage road opposite the Pali has been made by blasting the hill side. As soon as we have driven through the gate-like opening, we get a full view of the eastern shore of the island of Oahu: below us, from amidst luxuriant verdure, undulating, grassy, cone-shaped elevations rise into prominence. The road cut in the sides of the rock winds down into the plain and disappears among the plantations. To the North, on the left, immediately beside us, stands the steep wall-like side of the Pali, from which Kamehamaha, a native monarch, after his victory over the king of Oahu, dashed his enemies down into the depths.*

Beyond the Pali, a broken-edged, rocky ridge runs northwards: and further on again several other ridges descend towards the sea. The trade wind and the accompanying rain, as well as the waves breaking shorewards, have commenced to undermine and make ragged the primordial lava steams, endowing them with the most romantic shapes.

But in order to see all this well, plenty of patience is required, for the vicinity of the Pali is a favourite haunt of clouds: while in Honolulu the sun is shining, at the end of the Nuuanu valley clouds are settling on the crest of the rocks! No day passes without clouds paying a visit to the environs of the Pali. From here they would pass on their way with the wind, only, when they descend lower down, their path is obstructed by the ridges. Then the warmer atmosphere saturated with the flowery perfume of Honolulu surrounds them; the falling drops become rarer, then assume the form of dew, letting the sunrays pass on their way to the beautiful Honolulu. The description may sound flowery: but I speak from experience. At the highest point of the valley, I have walked in cool rain and then «done» every grade of the scale I have

* Kamehamaha united the islands: before his time, every island had its own ruler.

described: and I have observed the same phenomenon many a time from my window.

The greater part of Oahu may be toured by rail. The terminus of the small narrow-gauge railway built on the shore, lies on the east coast of the island, 71 miles from Honolulu. Sugar plantations are to be found both on the west and east coasts: while at the northern extremity of the island, a mountain range built entirely of lava descends precipitously into the sea.*

On the east coast, 66 miles from Honolulu, we find the Haleiwa Hotel, a comfortable hotel in beautiful surroundings standing in the centre of a little garden, which is a favourite resort of the inhabitants of Honolulu.

Sport in Honolulu.

Surf-riding. Shark-hunting. Pau race.

In Honolulu we can indulge in all kinds of sport: I shall only briefly mention the specialities of the place. One of the latter is «surf riding», i. e. boating on the outriggered canoes used by the natives, over the so-called break water waves rushing shorewards.

Surf-riding is a «kanaka» sport, a delightful pastime, for which, however, special preparations must be made, — or to be more accurate, a special kind of costume must be worn: for, when the waves are running high, or when the boat gets between two waves, those sitting in it are completely submerged. In the bows of the long, narrow boat with an outrigger on one side, one of the natives takes his seat, the other at the rudder, while the passenger sits in the middle. They then row quietly out, as far as the swell allows: as soon as the steersman catches sight

* The layer of vegetable mould crumbled from the lava, in contrast to the crumbled layers on the islands of Kauai and Maui, is not red but brown, with an insignificant quantity of red clay.

of a lofty wave approaching from the distance like a long mountain ridge, he turns the boat round, and both the natives start rowing rapidly. The huge wave overtakes us, takes the boat on its back, while the oarsmen with as quick a stroke as possible endeavour to keep the craft on the crest of the wave. Thus we approach quite close to the shore. The surf has sprinkled us a little, but we repeat the experiment twice, thrice, or as many times as we like . . . On one occasion the steersman miscalculated, and turned the boat round in front of a wave before which, quite close to it, another slower wave was advancing. Carried by the larger wave, we overtook the smaller one, into which the bows of the boat were buried so deep that in a moment it was half full of water. I know now by experience what a double wave is capable of doing with the craft floating on its crest.

The visitors to Waikiki Beach (the fashionable seaside resort of the Honoluluans) try their hand at another kind of native water sport, — surf riding on a plank. As soon as the marine horseman lying flat on the plank gets near enough to the wave he wants, he turns round, and, striking out with his feet, endeavours to advance with the wave. But the end of the matter is generally that the wave overturns the plank and the horseman somersaults, plank and all.

Experienced natives actually stand up on the plank dashing in on the crest of the wave, in the distance looking for all the world like so many Neptunes riding on the waters towards Waikiki Beach. But the final stage of this display too is as a rule a somersault.

The third water sport in vogue in Honolulu is shark-hunting. The Pacific Ocean with its many-coloured fish produces large numbers of sharks too. Shark-catching in the vicinity of the Bay of Honolulu is generally carried on from a benzine boat of 4 tons' displacement belonging to Young Brothers. With this little motor boat, in the com-

pany of an agreeable Honolulu sportsman, I went out to look for sharks.

On the first occasion, we left the harbour at 8. a. m., at which early hour the vicinity of the bay is all life, the people being engaged in all kinds of fishing. Scarcely had we started when we came across Japanese wading up to their waists in the shallow water or angling from boats. Outside the bay people in two-oared punts were looking for enormous turtles (some of them weigh 4—500 pounds). These two-oared boats moved slowly, then suddenly stopped: one of the oarsmen seized a rifle from the side of the boat, and fired at a turtle rising to the surface: but it is no easy matter to hit at a distance of 50—60 yards from a rolling boat. The bullet missed its mark and the turtle escaped. Twice more I heard the fisherman fire: then silence followed; he had lost sight of the prey. The turtles cannot be particularly plentiful: all the day long I only saw two.

Hardly had we made our first observations when we arrived at the sharkhaunted spot (about a mile from the shore). The benzine boat stopped; we threw overboard the bait attached to an airtight tin buoy — on this occasion two fattened flayed sheep —; then fastened the hook attached to a rope several yards long to the buoy, and dropped into the sea, immediately beside the boat, a second hook provided with bait.

After waiting an hour and a half — during which time the traditional trade wind had drifted the little craft well out from shore — our boatman drew our attention to the fact that a shark was hovering round the bait attached to the buoy. From a distance the presence of the monster, in the rather ruffled water, was betrayed by a yellowish-green, oblong, shadow-like line swimming below the surface. We let the creature swim about to his heart's content: after hovering near for a few minutes, he took courage and bit a large piece of the sheep off, using such

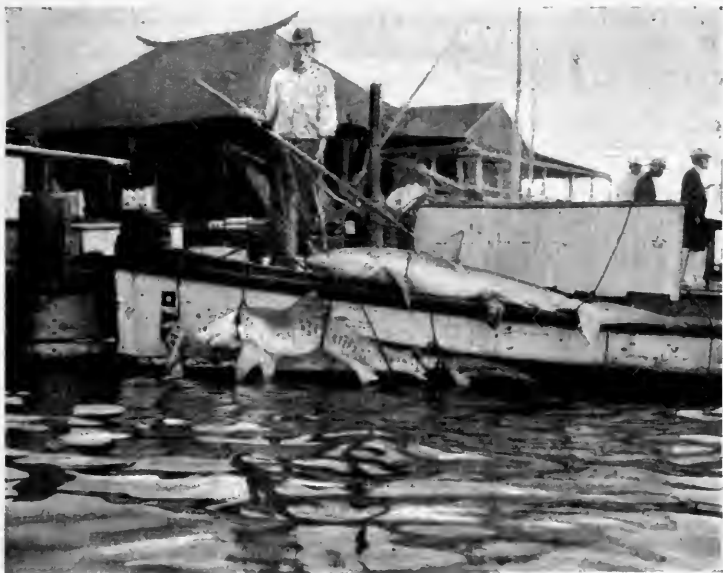
force that part of his body actually rose above the surface. After a short interval, he went to work a second time, and then a third! Meanwhile we were drawing the bait nearer. Two other sharks had by this time appeared: one of them seems to have got a slight taste of the hook on the edge of his mouth: for he writhed a little and then swam away. Our young boatman, who had already harpooned sharks, took up a position on the covered part of the boat, harpoon in hand, ready to thrust. Our shark again approached the bait: we could now see every movement of his quite distinctly. We gradually drew the bait almost up to the boat: and the infuriated monster was now biting vigorously away within reach of our craft... As he thus partially rose to the surface, our man drove the harpoon into him, but not in a fatal spot, and, as I thought, not with the necessary force. The harpoon merely grazed the shark, which, after a minute or two, re-appeared; the harpooner again missed his aim. The same thing happened at the third and fourth attempts: and then the hungry creature relinquished all further attacks upon the bait.

That it was always the same monster, I was quite convinced, for I could clearly see the marks made by the harpoon. The behaviour of the second (which only tasted the bait) and the third shark, was quite different: they soon made off, so it seems not all sharks are alike in disposition. Or perhaps we may explain the affair by a greater degree of hunger, or a half-satisfied appetite? Tired of the clumsy hastiness of our fisherman, we returned from our first trip emptyhanded.

On the occasion of our second excursion, we started at 7. a. m.: and we were accompanied by Mr. Young sen., an adept fisherman and an expert harpoonist. We left under favourable auspices; for the sailors of a large vessel that had been riding at anchor in the bay since the previous evening, told us they had seen four or five sharks hovering round the ship on the watch for prey. We threw

out the bait, — on this occasion, instead of sheep, a large joint of beef was fastened to the buoy.

We stopped near the large vessel: and the sailors motioned to us that a shark was swimming about, now here, now there: and indeed, in less than half an hour, one of the hooks had caught a shark. The victim for 10 or 20 seconds tugged vigorously at the rope, then re-



The «catch» of one day's shark-fishing, near Honolulu.

mained so still that we thought it had escaped. However, with a view to examining the bait, we began to pull in the rope, and with it came a good-sized fish. To prevent a long struggle, the moment it reached the surface, I put an expansive bullet into its side. All at once it stretched out: and the harpooner thrust his weapon into its flat forehead (about 4—5 inches from the edge of the mouth).

Scarcely had we tied the prey to the side of the

boat, when the men on the big steamer began to fire at the sharks swimming all round. They did no damage to the sharks but certainly did not improve our sport, for none of the monsters appeared for some time.

As my fellow-fisherman had important business to transact, I took him on shore during the forenoon, but returned myself to continue the work.

About 4 p. m., a courageous — or very hungry — shark four times attacked the hook; on the fourth occasion he met his doom. As an experiment I shot him in the belly: and the expansive bullet had a still greater effect than in the case of the first fish. The length of the first was 8·5 feet, that of the second 7·8 feet: in point of colour, the former was yellowish-green, the latter striped like a tiger.*

June 11. is a national holiday in the Hawaii Islands: before the Americans became the lords of the group, on this day the island world resounded with the noise of primitive Eastern games and amusements. To-day we still see something of the old world: but it is possible that, in a short time, the American system will transform everything.

The most prominent feature of the festivities was the «pau race», which was held on the polo ground. The arrival of the lookers-on was a picturesque sight. The women and men taking part in the race came on horseback: and, as is the fashion on most of the islands, the women ride like men.

How very different this kind of riding is to hanging in a side-saddle! The horsewomen rode madly in and out among the carriages and horses, arranged miniature horse-

* On this day the sharks, taking no notice of the large bait swimming on the surface, were looking for prey down below. I cannot explain this matter, still less so, seeing that the conditions of weather etc. were practically the same on both days. Perhaps the explanation of the monsters' conduct may be that, on the first occasion, the fat, flayed sheep used as bait were of a white hue, while that employed on the second was of a dark colour and devoid of fat. The natives believe that the sight of sharks is defective: and that is their reason for the fact that he rarely attacks brown-skinned natives. Perhaps they are right.

races as preliminaries to the «pau», and — wonder of wonders! — not a single steed ran away with his rider. Had they made the experiment in side-saddles, what a lot of hats would have been lost, — and then the flying hair and the falls! The habit which falls down on both sides like a skirt does not render the Amazons riding in this manner the least bizarre! The men came in Mexican saddles, with enormous crested spurs . . . And now let us look on at the Pau race: —

Eight native and half-breed women, without hats, in dark habits and with coloured ribbons thrown over their shoulders, took up their positions beside a long wall opposite the finishing post of the course: at the same time, at the finishing post eight men (Americans and «Kanakas» mixed) took their stand, on foot. When the signal was given to start, the women started to gallop furiously. When the first horsewoman arrived at the finish, one of the men seized the bridle; the woman jumped off, threw the ribbon round her partner's neck; and then the horseman started to gallop back. The same process was carried out by all of the eight women and men. The first to arrive at the point from which the women started wins the prize. There is poetry in it: I can conceive how the young cavaliers run the risk even of being trampled down in their eagerness to bear the ribbons of their ladies to victory!

On the island of Maui.

(From Honolulu to Kahului, 90 s. m.)

The Crater of Mount Haleakala.

The Capital Honolulu is connected with the islands of Molokai, Maui, Hawaii, and Kauai by several weekly services of steamers. The routes of the mail and freight vessels have been arranged to give tourists every facility of seeing all the principal sights.

The S. S. «Claudine» was advertised to sail at 5. p. m. on May 24: but it was 7. o'clock before she started. The navigable channel leading out of the harbour after sunset is marked by red and white lamps: when we were quite close to the end of the channel, a tremendous shock shook the ship, which began to rock from side to side and to roll as in the most violent storm... We had sailed on to coral reef. In front of us to the right I could still see signal lamps: so we had evidently turned to the left too soon.

The screw was working vigorously: but the ship refused to move. The waves breaking shorewards made her tremble violently: and when, about half an hour later, we started, at every step we grazed the bottom. After a struggle of about two hours, we at last floated free by the aid of the flood tide, and were able to continue on our way.

The effects of the English system of education, which aims at hardening the nerves too, were evident in the behaviour of the passengers, who remained impassive, and bore themselves bravely. When, after the first shock, the crew took their places in the lifeboats, the women were seized with fear, which, however, only appeared in their faces, — for they did not start howling. The native crew did their work with the greatest coolness. (The «kanaka» is a splendid seaman, and his heart is at home on the water).

On May 25, we anchored off the N. W. end of the island of Maui: then, passing round the north coast, sailed on towards the S. On the eastern side, the steep shores are composed of lava and other volcanic relics in layers: in two places, near the precipitous shore, a sugar-loaf rock stands out of the sea, just as in the vicinity of the Egmont volcano in North New Zealand.

I landed at the village of Kahului, on the N. E. coast of Maui. In the bay a three-masted American vessel for the transport of sugar was waiting for its cargo: while on shore little engines were shunting the raw sugar ready

packed in bags for export. Farther inland, large storehouses, and still farther to the N. W., in the direction of Wailuku, the Capital of the island, sugar factories could be seen.

The small railway connecting the sugar-cane plantations stretching all around, carries passengers too.

The little engine drew up with a comfortable carriage and an open luggage van: and we started with a ringing of bells that made us think we were at least travelling on the American Pacific. The line passes the sugar-cane plantation and factory of the Hawaiian C. B. S. Co: this latter is said to be the largest sugar factory in the world. Whether it is really so, I cannot say; for the Americans «draw the long bow» here too: but that it is very big, is quite certain.

On the ploughed fields of red clay, large stones are lying about: here and there they have been piled up in heaps, but the volcanic mountains all round, particularly the Haleakala, have so plentifully supplied the district with stones that there can be no talk of completely ridding the soil of them. The bushes and tree trunks covered with the dust of the red clay seem to burn in the sunlight: while the grey horses with their legs painted red by the dust present quite a picturesque appearance. On the plain occupying the centre of Maui, the upper layer of red clay is said to be 6—8 feet thick: while beneath it lies protozoic lava.

The ploughing required for the cultivation of the sugar canes is done by steam ploughs: on one plantation I saw three pairs of such ploughs at work. The whole island is intersected with irrigating drains.

After a run of half an hour we arrive at the Paia sugar plantation. The owner of the neighbouring inn was waiting with all the requisites for an excursion to Mount Haleakala. We sent the pack-horses off, and then started to drive the first 7—8 miles.

Scarcely had we set out, when, to the left, we were struck by the appearance of four hills standing in a row,

of graduated sizes: these elevations with craters more or less overgrown with grass reminded me of the volcanic mounds seen in the vicinity of Auckland (N. Z.).

Otherwise, as far as the eye can see, nothing but sugar-cane plantations; the group of dwelling-houses built on a uniform plan for the use of the hands at work in the plantations and factory, compose a little village standing by itself above Paia.

M^t. Haleakala (the Sun's House) which occupies the western half of the island, is so extensive, its summit so flattened, that it could bear the weight of a mountain twice as high (its height is 12,032 feet).

After a seven miles' drive, we mounted on horseback, and started to climb the long hillside which stretches down to Paia, at a walk. We rode about 12 miles to the crater. The first four miles are covered by pastures; these are succeeded by a grassy district overgrown with three kinds of bushes: then the pastures fade away in the distance, and almost until we reach the summit we see nothing but bushes. With the exception of a primeval forest showing to the S. W., the woods have been exterminated, a fact to which the charred stumps lying on the road bear eloquent witness.

All round the foot of the mountain, an ancient lava stream is seen peeping forth from gullies and the sides of mounds: on the grassy spots higher up, broken fragments of lava stones are lying about; while the last two and a half miles of the road are strewn with large stones, lava boulders like floes of ice and dustlike material (or cinders).

It was at the foot of M^t. Haleakala that, for the first time since leaving Europe, I saw the singing lark. It is only a year or two since it was domiciled here: it has propagated well enough, and must feel quite at home, for the ones I saw were singing very loudly. Besides the lark, a kind of bunting is to be found all over the mountain in large numbers, right up to the crater. In addition to the

song-birds, Mt. Haleakala is inhabited by lowing cattle: from among the bushes, pied calves and cows gaze at the passing horseman, and, when slightly alarmed, with tail



The crater (20 miles in circumference, and 2000 feet in depth) of Mt. Haleakala, on the island of Maui (Hawaii group).

(From a relief-map made by Prof. J. Pope, of Honolulu.)

pointed skywards, loudly snorting, they run away. It is extraordinary that these animals, which are left to their own devices, without any herd to look after them, do not develop any inclination to butt.

It was raining when we reached the summit of the mountain; and, as we were late, we did not find the tourist house. By the aid of the fuel left behind by the tourists who had been there before us, my guide started to make tea, while I strolled off to the neighbouring crater. A white rain-cloud obscured everything: then a rapid current of air drove the curtain from the edges of the crater, and the latter, which is 20 miles in circumference, was



The brink of the Haleakala Crater.

displayed to my view (it is 7·48 miles in length, and 2·37 miles in breadth!) The shreds of cloud that had remained behind in the crater gave the projections of its sides and the dark cones of the subsidiary craters lying at the bottom a most mysterious shape.

In the deserted crater, the largest extinct crater in the world, all at once signs of life appeared: some unknown being raised its voice in the interior, from several quar-

ters. The voice was like the quacking of the snipe, yet there was something about it like the bleating of wild goats (as a matter of fact, goats long become wild do live in the crater). But let us abide by uncertainty, which is more in keeping with the spirit of the place.

The north wind turned cold; it was high time to drink the warm tea. We soon had our «beds» ready, —



Craters at the bottom of Mt. Haleakala.

with volcanic cinders for a mattress, we wound ourselves into rugs, and lay down. Scarcely had we done so when some winged creature swept swiftly over our heads, repeating the process from time to time: it must have been a bat searching for beetles, — or was it the spirit haunting Haleakala?

Before daybreak we were astir, with a view to watching the sun rise from a more distant spot, considered to

be more favourable for that purpose. As the sun rose, the crater, more than 2000 feet deep and 20 miles in circumference, gradually assumed a more pronounced form. Its walls are so steep, the rocks so sharply formed, that one would think Haleakala had only just ceased its activity: yet not one of the inhabitants of the island still living had seen it at work, and there are no reliable traditions concerning its last appearance on the field of action. Of the many coneshaped elevations (there are said to be 17) standing at the bottom of the crater, in the case of five I could distinctly make out the grassy crater. From the foot of one of these craters, lengthwise across the main crater, a stratum of lava grown quite cold could be seen darkling in the depths: this stream of lava has forced a passage for itself through the north-eastern gate of the main crater.

In the clear morning light, I could see as far as the island of Hawaii, 26 miles to the S. of Maui: from this point the former island seems to be occupied by 4 hills, Kohala (5489 feet) on the northern shore, Mauna Kea (13,805 feet) to the S. of the same, farther still to the S., Mauna Loa* (13,675), which from time to time develops activity, and on the western side Haalalai (8275 feet).

Like Mt. Haleakala, all four hills are very widespread: on the sides of Kohala and Mauna Kea, many elevations can be seen, probably parasite craters.

We returned to Paia towards evening: next day I drove through sugar plantations, touching at Kahului, to Wailuku (about 1500 inhabitants), the Capital of the island, and from Wailuku to the neighbouring Jao Valley. This valley is composed of steep hill-sides, more than 4000 feet high, which finally close it in.

* Mauna Loa is very extensive on the eastern side: its peculiar shape is due to the fact that it is composed entirely of lava. According to Sievens, the territory lying between Mauna Kea, Hualalai and Mauna Loa is covered by a stratum of lava of a thickness varying between 3600 and 5400 feet.

Next day I left the harbour of Mc. Gregor, situated on the western shore of the island, 9 miles from Wailuku, and sailed for the island of Hawaii.

From the island of Maui to the island of Hawaii.

(144 s. m. from Mc. Gregor to Hilo.)

Our boat started from the harbour of Mc. Gregor about 9. p. m.: the same day we anchored once more at the island of Maui, and next day, at dawn, we stopped twice, on the northern coast of Hawaii. This island, 90 m. long and 74 m. broad, is the largest island of the Hawaiian group (it has a circumference of 300 miles). Along the northern shore, besides the fishermen's cottages scattered at large intervals, we catch glimpses of the landing-places with their scanty palm plantations.*

Around Mounts Kohala on the N. W. side of the island and Hualalai to the W., we see modest pasturelands. The moment the ship turns towards the east coast, the scenery changes: here the luxuriant plateau with its abundance of rain, which has no need of artificial irrigation, is covered with sugarcane plantations. From a distance the rows of sugar fields give one the impression that the island-shore is covered from one end to the other with mixed fodder. Here and there we see villages, the homes of the labourers working on the sugar plantations and in the fields. The sugar factories with their smoking chimneys are for the most part situated on the precipitous shore, with a view to the manufactured sugar being shipped on the spot.

For a distance of 60 miles to the S., as far as Hilo,

* No cocoa-nuts are produced on the island of Hawaii, where the cocoa-nut tree is planted more as an ornamental tree, or to afford shade in the vicinity of the landing-places or dwelling-houses.

the Capital of the island, the lofty shore, the height of which varies between 200 and 300 feet, descends to the sea like a steep wall: waterfall after waterfall is to be seen on this wall, dashing down in places direct from the plateau, in others trickling out from the sides. These waterfalls have cut out narrow valleys in the sides of the shore: the waterworn places are overgrown with grass,



Typical landing-place on the steep lava shore of the island of Hawaii.

trees, and bushes, while the rocks are covered with damp moss. All along the shore composed of lava which cooled suddenly, caves gape down over the frothing waves. For a distance of 60 miles, there is no end to these caves, to valleys luxuriant in vegetation, and to waterfalls.

The port of Hilo (5000 inhabitants), the Capital of Hawaii, lies beside a stream that has its source in Mount Maona Kea: the town, which has been built among gar-

dens, is surrounded by sugar plantations. In 1880 the lava stream flowing from the side of Mount Maona Loa stopped at a distance of $3\frac{1}{2}$ miles from the town, among the plantations. The lava crevices have already been covered by the Lehua* shrub which produces red, brushy flowers.

Besides the abundance of moisture, it is the quality of the lava which is responsible for the rapid decomposition and consequent fertility. To judge by its coherence



Lava cave, near Hilo, in the island of Hawaii (Hawaiian group).

and smooth surface, the black glossy lava must have flowed with great force: in some places its surface is as hard as a stone and bright, in others hard and light, but after breaking it crumbles. The surface, which is fluted like a conch, cracked when it cooled down: in places it is piled up like an ice floe, and has formed arches and

* When a tree, the Lehua is called by the «Kanakas» *Ohia*: it is identical with the *rata* shrub and tree growing in N. Z.

caves. One of the caves formed in this way has been covered all round by Lehua shrubs; its arch is overgrown with ferns and moss: above another lava cave of less recent origin a brook flowing in a lava bed forms a waterfall, the so-called «rainbow waterfall».

The Kilauea and Kilauea Iki Craters.

From Hilo travellers proceed by train to the station of Glenwood, 22 m. to the S., and from there drive on 9 miles to the S. W., to the Volcano House Hotel. The railway passes through the large Olaa sugar plantation. In the distance we could see Mt. Maona Loa, and, 30 miles to the N. of the same, Mt. Maona Kea. The carriage road, which continuously ascends, leads through woods of Ohia trees and Lehua shrubs. The higher the road ascended, the more the brushy flowers that were to be seen on the trees. Wherever there is any room, ferns peep forth from the thicket, growing to such a height and with leaves so large that they surpass even those of New Zealand: the trunks of the trees are overgrown with bryony, the leaves of which resemble those of the water lily, while on the side of the road coral pink strawberries grow, and the road is flanked as with a path by mountain roses.

The sweet juice of the red primate flowers is sucked by a little bird (the Iivi) of a reddish hue, which chatters gaily as it does its work. But the miner bird also adds to the charm of the scene: its business on the Hawaiian islands is to destroy the plague germs,* though the general complaint against it is that it is a sworn enemy of the small song-birds.

The woods in the vicinity of Mt. Kilauea grow on

* The plague crops up sporadically on the Hawaiian islands: during my sojourn there, a few fatal cases occurred on the island of Oahu: but of recent years prudent measures have succeeded in nipping every epidemic in the bud.

an ancient lava stream: even to day the fertile surface is so thin a stratum that the roots of the trees spread out sideways. Owing to this fact and to the continuous presence of moisture, the extermination of forests is carried out in a special manner: the trees are not burned down, but as they are easily thrown down, are simply drawn into heaps by the aid of a small steamengine, and the territory all round is then ploughed and sown.



Fern thicket in the vicinity of the Kilauea Crater (Hawaii).

The Kilauea Volcano House Hotel is situated at a height of 4000 feet above the level of the sea, at the edge of the Kilauea Crater, in the midst of sulphur fumes. Together with its wing buildings, it offers a comfortable home to 30—40 tourists: it is a pleasant summer resort, and the most convenient headquarters for excursions to the Kilauea and district. Below the hotel, an unusual and charming picture is afforded by a gaping, enormous crater,

filled almost to the brim with black lava. Southwards from the hotel the length of this huge, black-bottomed crater is 2·93, its breadth 1·95, and its circumference 7·85 miles: beyond the centre, nearer to the opposite and lower edge of the crater, the Halemaumau (the Home of Eternal Fire), a small active crater which continually offers signs of life, smokes vigorously within the large, extinct Kilauea.

If we identify the Kilauea with the Halemaumau



View from the brink of the Kilauea Crater.

working within it, we may say with the Americans, that the largest active crater in the world is the property of the U. S. A.: for my own part, I should be inclined to add that the large crater is the bequest of a concluded eruptive activity, and that to day it is nothing else but the basin acting as the receptacle for the overflow of the small, active Halemaumau.

The product of the last activity of the Halemaumau — a few months ago — still gives off hot fumes in certain

fissures of the huge black surface: of a morning and evening, in the cool vapour-filled air, as in the geyser-districts of New Zealand, in numerous places we see the gases escaping upwards.

A footpath $3\frac{3}{4}$ miles long leads over the lava field from the hotel to the Halemaumau: though most tourists ride the first $3\frac{1}{2}$ miles, and do the remaining quarter mile on foot.



The smoking Halemaumau in activity within the ancient Kilauea Crater.

The glossy-surfaced lava, hard as stone, of the appearance of pitch, which in places is fluted like a conch, must be included among the so-called strongly melted lavas. On the broken surface we see accretions. Near the Halemaumau, two yellowish patches give off sulphur fumes, which penetrate and render porous and light the vapour-impregnated lava. At a quarter of a mile from the crater (1) and quite close to its edge (2), stand three pitch-black

chimneys of the brilliance of obsidian, which, when the lava was flowing, played the parts of smaller separate craters: their walls, hard as stone, can vie in weight with iron. Again, quite near to the Halemaumau, we find 4 lava pits 6—8 square yards in area, and 3 feet deep: the descent into the same is a foot wide. In these pits we can collect specimens of lava of various hues and composed



Lava chimney of the brilliance of obsidian, near the Halemaumau.

of various constituents, — among others pieces of the shape of stalactites —, though the place has been thoroughly ransacked, as I found very few perfect specimens.

The Halemaumau crater is 200 yards long, and 150 yards broad; it is of oval shape, with side walls descending vertically for a distance of 400 feet: its bottom is covered by petrified lava, on the surface of which we find another round indentation. full of petrified lava of a lower

level. This indentation is the real active crater-mouth. During my sojourn there, it smoked in dense fumes, a sign that the level of the liquid lava is very deep down.*

In the fissures of the small surface of the indentation, of an evening we saw lines of fire.

During activity, the upper crust melts, the lava rises to the surface, pours out into the Halemaumau crater, and



Pettified lava-fall and cave in the Kilauea Crater.

finds a way for itself through the crater wall into the basin of the large Kilauea: in fact the lava has been known to overflow the brim of the Halemaumau.

When the ctivity ceases, in the crater of the Halemaumau the level of the lava may sink lower than before

* During a period of eruption or of discharge of lava, the fumes rising from it are more transparent, a fact observed by those living on the spot.

the activity began, or on the contrary may rise higher, — e. g. in 1896 the lava in the Halemaumau was situated at a depth of 1000 feet, and since then has risen 600 feet.

The cunning miner birds have convinced themselves that tourists must scatter plenty of crumbs at the edge of the crater, so they have pitched their camp in the home of eternal fire! — and they are not at all disturbed by the avalanches of stones that roll down from its sides!

Besides the Kilauea crater, near to the eastern side of the same we find the Kilauea Iki (little K.) crater. From the walls of this little grass-grown crater, three quarters of a mile in circuit, in 1898 boiling lava burst inwards, and transformed its depth (then 1500 feet) to one of 900 feet, — thus raising the bottom by a stratum of lava 600 feet thick.

The seven craters. From Volcano House to the harbour of Honuapo.

(36 miles.)

Of the seven craters situate within 12 miles of the Volcano House Hotel, three are on a level with the surrounding woods; they are so overgrown with ohia trees, that, until we get quite close, we cannot make out their character. The fourth crater, with its cone several hundred feet high, rises prominent above the woods; we can ride some distance up the side of the cone, and after a short climb are at the top. In a deep hollow padded with flowering lehua shrubs, we are welcomed by a chorus of iivi birds: on the precipitous slope overgrown with verdure and flowers, the only prominent features are the crater-mouths that jut out here and there, with their bright red brinks of burned out cinders.

The next two craters are of more recent date, with deep and precipitous sides. The last again reveals a new

one: in its crater three quarters of a mile long and half a mile broad the bottom has two levels, one of which is overgrown with grass, while the other is considerably deeper, and bare.*

Two miles from Volcano House, we find the so-called «tree moulds». A stream of lava that burst forth some decades ago from the side of Maona Loa, to the W. of



The crater level with the ground, looking from the crater situate on the top of a cone (district of the seven craters).

Kilauea, overran a part of the forest: as the flowing lava surrounded the tree-trunks, it cooled quickly under the surface and formed moulds. The moulds stretch from the surface of the ground to the roots of the trees, showing a

* Numbers of tiny, olive-red volcanic glass fragments are to be found in the vicinity of the two craters and of the Kilauea.

cylindrical shape a few inches thick, hollow within, with designs similar to that of the bark of trees.

I drove 36 miles to the harbour of Honuapo, to the S. W. of the district of the Kilauea: the well-kept carriage road passes over a lava stream several decades old. Where stones have been quarried for making the road, we see the lava stratum in an intersection several feet high: it contains



The double-bottomed crater.

red and brick-red cinders in large quantities, and has brought huge stones down with it. This lava-covered district has not crumbled much as yet: only in the fissures and valleys do we see scanty vegetation.

From Honuapo back to Honolulu.

(245 s. m.)

I took ship at Honuapo towards noon on June 2. Our boat stayed for the night in the Bay of Kealakakua, from where, on the morning of the 3rd, I drove 13 miles to Kailua.*



Shipping horned cattle, on the island of Hawaii.

The carriage road 16 miles long, passes through coffee, pine-apple, and tropical fruit plantations. On the plantations we see stone after stone, and yet the crops are plentiful: the pineapples, about the size of a man's head, seem to shoot out of the lava, though of course, as

* This part of the island of Hawaii is an exception to the rule that the western shores get little rain, — a fact naturally due to the direction of the wind (here blowing round to the N. W.).

a matter of fact, a very small quantity of the excellent, volcanic crumbling soil is required to make the seeds planted here produce well. The pineapples grown in this district are preserved in a factory near Nepoopo.

At the station of Laipahahoe, horned cattle were brought on board: two boats were despatched from the ship to the edge of the bay;* the cowboys drove the



Natives awaiting the arrival of the ship (Island of Hawaii).

cows or bulls tied by the horns into the sea, threw the end of the rope into the boat, while the oarsmen drew the swimming animals in and tied them fast to the side of the boat. The 8—10 animals thus fastened to the boat were then pulled to the ship's side, where they were hauled on

* In the Hawaiian islands, as the harbours (except Honolulu and Hilo) are not navigable by deep-draught ships, lading and unlading is generally done in this way.

board by means of a crane. The process was not particularly inspiring: but I must admit that the native sailors did their work very skilfully.

In two ports that we touched at during the day a large number of natives were to be seen; the women appeared with wreaths of flowers round their necks, while the men wore flowers instead of ribbons on their hats. In many respects their behaviour resembles that of their New Zealand kinsmen.

After stopping at two other places on the island of Maui, I reached Honolulu again at dawn on the 4th.

On the Island of Kauai.

(From Honolulu to the port of Waimea 120 s. m., from Waimea to Lehue 27 miles, and from Lehue to Hanalei 32 miles.)

The S. S. «Mikahala» of 440 ton's burthen left Honolulu at 5 p. m.: on the next day at dawn we stopped on the eastern shore of the island of Kauai, then on the southern shore — altogether four times; — and I finally landed at the village of Waimea.

At Waimea a stream flows into the ocean: and all along its course, between primeval lava walls, a verdant valley stretches back among the hills. This valley is occupied by farms leased by Chinamen and Japanese, who for the most part are rice-growers. At harvest time, — as at present, — the Chinese farmers walk round the rice-fields from morning till night, frightening away the little birds that ravage the grain, with guns or by shouting: and string nets which keep tin boxes and rags in perpetual motion are also used as a protection against the small enemy. These nets are shaken by the wary planters from one point, sometimes from a tower-like elevation.

From Waimea the tourist route leads 12 miles to the N., to the Barking Sands. The carriage road to the sea-shore passes through a sand desert overgrown with bushes

for a width of a mile or, farther on, with turf. In the bushy territory there are plenty of wild turtle-doves: while on a sheet of shallow water I saw wild fowl similar in appearance to our night-herons.

To the right, round the foot of a mountain range occupying the centre of the island, sugar-cane fields stretch: to the left at a distance of 18 miles, looms the island of Niihau.



Lava in a highly crumbled state, on the island of Kauai.

The carriage road comes to an end at the Barking Sands hill. The sides of the sandhill, which consists of fragments of conchs, are overgrown with a kind of bryony, with succulent oval leaves, producing a violet-coloured flower: in dry sunny weather a rubbing of the sandhill produces a sound like the barking of a dog, — though I found it moist and dumb.

From the sand hill to the North, the mountain range

occupying the centre of the island gradually approaches the shore and descends precipitously : on its steep dark and gray sides, the parts which have crumbled into red clay offer an effect of colour that reminds us of the American cañons.

After passing the night at Waimea, next day I drove 27 miles along the splendidly kept State road skirting the southern shore, to the town of Lehue.

Here all traces of the sand-hills disappear : on the extremely fertile red clayey soil everywhere sugar-canes are planted, while in the smaller valleys rice is grown. The red clay is a volcanic product just as crumbling and of the same composition as that found on the island of Maui : but it requires less cultivation, for the fertile soil is not so thickly covered with lava stones, as the decomposition is in a more advanced state.

In the cuttings, under the upper layer of red fertile clay, over the stones that have begun to decompose, the part that has already decomposed into clay surrounds the stone that forms the kernel in strata. The decomposed part laid layer-wise in round or oval rings (according to the shape of the stones), even in the case of complete decomposition, has preserved the original shape of the stone.*

According to geologists, Kauai is the oldest island of the Hawaiian group : the volcanic activity originated here, and spread S. W. to the island of Hawaii.**

The island of Kauai is called the garden of the Hawaiian group. Seeing the gardens of its Capital Lehue, with its few hundred inhabitants, we accept the statement in part, — but only in part, for the excellent soil of the

* I found other crumbling lava strata or stones playing in blackish blue hues, though not in such large quantities as on the island of Tahiti.

** The leading volcanic channels of the two islands still point to a common origin. So during the eruption of lava from Maona Loa (Hawaii) in 1898, the fish suddenly died in the fishpond of Numilo near the southern shore of Kauai, from the sulphur fumes that broke out there too.

island is elsewhere used for the production of agricultural vegetation, and very little room has been left for flowers. In the distance, on the land side, hills surround Lehue, which lies close to the sea among sugar-cane plantations, in the form of a crescent.

From Lehue I drove to the Valley of Hanalei, some 32 miles along the northern shore. The eastern and nor-



Native house in primitive style, in the village of Kapaa.

thern shores of this island, right up to the above-mentioned valley, are similar to the southern shore. Up to the foot of the mountain range occupying the centre of the island, sugar-cane plantations form a green ring round the island. The hills near at hand are covered with pasture-lands: while on those more distant the forests have not yet been destroyed. Among the plantations we see patches of fallow too, — a fact that proves that the continual

plantation has in places exhausted the productive capacity of the vegetable mould. In the small valleys flanking the shores, as on the southern side, we see rice-fields: naturally the rice birds visit these spots too, and the closely-cropped Japanese and the pigtailed Chinamen, when the crops are ripe, have to act the parts of «scare-crows». In the Hanalei Valley, we have the non plus ultra of bird-scaring. The wide valley bounded by mountains is exclusively occupied by rice-fields: from early morning till late in the evening we hear the sound of guns, of tin boxes and of shouting. The rumbling of the ocean waves mingles with all these various noises. Were the valley not so absolutely charming and so completely natural in its simplicity, we should be disturbed by the wild clamour: as it is, we are only too glad to listen to the din proceeding from its interior.

To the west of the Bay of Hanalei, the northern shore descends precipitously to the sea: this part of the island is the most romantic; but owing to a lack of communication, the shores of the Pali (precipice) are only rarely available to tourists.

On the road 32 miles long, I twice saw cottages built of a kind of rushes on the model of the primitive Hawaiian houses, — in the village of Kapaa, 8 miles out from Lehue, and in the valley of Molooa, 19 miles from the same place. The natives living on these remote shores are of a more handsome type (nearer in appearance to the inhabitants of the Cook and Society Islands) than those to be found in the neighbourhood of the more frequented towns of Honolulu and Hilo, or indeed than those living in districts more in touch with the Capital, who have spirituous liquors and other luxuries at their disposal.

The stream Wailua flowing on the plateau, 7 miles to the N. W. of Lehue forms a beautiful waterfall: the water dropping like a veil forms a strong contrast to the dark lava basis of the bed and the precipice behind it.

CHAPTER VIII.

THE FIJI ISLANDS.

From Honolulu to Suva, the Capital of the Fiji Islands.

(2799 sea miles.)

On June 29, I started from Honolulu for the Fiji Islands by the S. S. «Aorangi» running from Vancouver to Sydney viâ Honolulu and Suva.

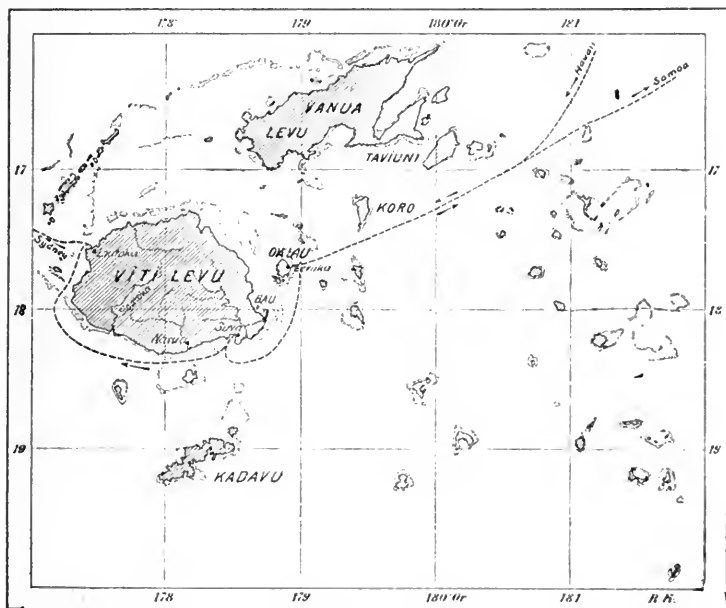
I had been for nearly three months voyaging about the Pacific, and yet, apart from the moderate ruffling caused by the trade wind, I had not met with any roughness of the waves: on this voyage the Pacific acted still more up to its name, for, even if by day the wind stirred its surface, towards evening, as a rule, the curly wrinkles disappeared, and the slowly moving lines of waves displayed a surface so smooth that one would have thought oil had been poured on the whole vast sheet of waters.

After an eight days' voyage of this kind we can understand how the primeval inhabitants of the islands could venture to leave their homes and be absent for weeks in small boats.

We crossed the Equator on June 30: on July 4., in the morning, we saw Mary Island (12 m. long) to the right. In the distance it appears as a yellow line: when we approach nearer, we can make out dark-green oval-shaped bushes studding the flat wilderness. Many birds live on the island; in particular a kind of gull with a straight

blue beak called the «booby» * is to be found in large numbers.

As our vessel belonged to a Canadian Company (Canadian-Australian Royal Mail Co.), the system of holding divine service on Sunday was observed, — as was not the case on the American ships I had been on previously. In this respect, as in most of his more important customs,



The Fiji Islands.

the American is endeavouring to drift away from the old English traditions: — as to what this American system is leading to, «*vide* San Francisco!»

* When the «booby» satiated with a feed of fish lands, the frigate bird which has been hovering on high in search of prey swoops down upon him; in his fright the booby vomits out the fish he has devoured, which the large bird of prey at once consumes. The booby is, besides, a very, sleepy creature: and it often happens that he falls to sleep on the mast of a boat and is easily caught.

On July 6., we saw Horn Island of volcanic formation; in the small hours of the 7th., one of the islands of the Fiji group rose to view in the distance, then, all round the same, several others belonging to the Fiji group became visible. About noon we sailed over longitude 180° , leaping a whole day according to the eastern calculation of time: and on the 8th. (after 8 days' sailing from Honolulu) we arrived at Suva, the Capital of the Fiji Islands.

Brief general account of the Fiji Islands.

The Fiji group of islands is situated between longitudes 177° E. and 178° W., and between latitudes 15° 43 and 21° S. The aggregate area of the islands composing the group (over 200 in all) is about 7430 sq. miles, — of which Viti Levu (the large Fiji) is 4112, Vanua Levu (the great dry-land) 2432, Taviuni 217, Kadavu (pronounced Kandavu) 124, the Windward Islands 59, Koro 58 square miles in extent.

The islands, with few exceptions, are of volcanic origin: the hills, which even reach a height of 3000—4000 feet, are covered from top to bottom by dense tropical vegetation; the rocks consist of basaltic and trachite lava. Most of the islands are surrounded by coral reefs. Vanua Levu and Viti Levu are well watered, with navigable rivers.

From May to November the climate is an agreeable one.* There is a plentiful rainfall all the year round, but particularly in the warm season, from December to March. According to the reports of the last 22 years (down to 1905) the average annual rainfall in the vicinity of Wainunu was 148·29, in that of Navua 140·79 inches, etc. In the so called «dry districts» (where the average is below 100 inches), the average annual rainfall varies between

* In the second half of July, particularly at the close of the month, the nights on the Fiji islands were so cold that rugs had to be used. The coolest morning temperature (6. a. m.) was 60° F. ($12\cdot5^{\circ}$ R.).

78 and 49 inches. According to the several annual reports, in 1894 the annual rainfall in the neighbourhood of Wainunu was 232·70 inches (next in order came Nadarivatu with a rainfall in 1904 of 204·33 inches). According to the reports of 22 years, in the vicinity of Suva, the Capital, the annual average was 102·48 inches.

The aggregate population of the 80 inhabited islands



Native sentry at the entrance to the Governor's garden, near the town of Suva (Fiji Islands).

was, according to the reports of 1906, 121,872: of this number, 86,816 were natives, 25,952 Indians, 2675 Europeans, 2281 Rotumans, 2047 Polynesians, 1649 half-breeds, and 452 of various nationalities. The Indians are employed on the sugar-cane plantations, and are brought to the islands for the most part under a contractual obligation of service extending over five years: the inhabitants of Poly-

nesian extraction are bound over for 3 years on the cocoa-nut plantations, or engaged as herds.

The native Fiji race belongs to the Papuan tribe: the inhabitants of the coast have intermarried to a large extent with the Malayans and Polynesians, while the mountaineers represent the darker (almost black) skinned Melanesian race. Fifty years ago, the Fiji natives were the most savage of cannibals; in the mountainous districts even 30 years ago human flesh was eaten: but to day the natives converted either to Catholicism or Protestantism have entirely renounced cannibalism. The retail of liquor* to the natives on the Fiji Islands is an offence punishable by law.

The native Papuans still possess large estates of waste land: the Governor is negotiating with them with a view to purchase and the contracting of long leases, intending to sub-let the larger estates.

Since 1881, the chief product of the islands has been sugar-cane: in 1905, 52.138 tons of sugar were exported, representing a value of £ 539.594. On the two large islands (Viti Levu and Vanua Levu) there are six factories at work, and these factories are the property of three companies. Besides, the islands produce cocoa-nuts, bananas, cotton, sisal hemp (*agave rigida* var. *sisalana*), rice, coffee, and tea: oranges and lemons are growing wild.

The island group, since 1875 a British colony, is governed by the Executive Council with the Governor residing in Suva at its head. The natives have been allowed special rights of self-government, under the control and supreme decision of the Governor. The island has a parliament too: but the parliamentary system exists on paper only (in a colony the only suitable method to pursue), in

* The prohibition is not always respected by the inn-keepers: and in the dark side-rooms of the bars the dark-skinned Papuans obtain liquor at an exorbitant price, — a price indeed that is quite beyond their means.

that the six elective white representatives are controlled by 10 whites and two natives appointed by the Governor, who thus secure a majority in the interests of the Government.

The Fiji Islands are well within the international lines of traffic: 1. once a month a ship runs from Vancouver (N. America) viâ Honolulu and Suva to Sydney; 2. another service of steamers runs between Sydney and Auckland (N. Z.) viâ Suva and Apia (Samoa); 3. besides, there is a special line of steamers running once a month between the Fiji Islands and Auckland, and between the same islands and Sydney; 4. the more important islands of the group are connected by local steamers.

. We can sail round several of the islands: but on land it is a more difficult matter. Carriage roads are found only in the vicinity of the towns and sugar factories; into the centre of the islands the only access is by foot-paths, which are often impassable owing to the swelling of streams due to continuous rain. If we add that, after an arduous walk over damp grass and through bush, we are obliged to pass the night in native houses with clothes dripping from a swim over the streams, it is not difficult to imagine that tourists think twice before venturing on any longer journey, and that after thinking the matter over, they prefer to remain at home.

What with ordinary agricultural development cannot be attained except after long waiting, may be made a *fait accompli* in no time by industrial investment, which offers prospects of greater profits: so, on seeing the enormous sugar-cane fields, I was able to imagine that, with the rapid development of the sugar industry, the conditions of traffic would improve considerably within a short time.

When I was in Suva, I met an Australian mining expert, who enabled me to see the samples of gold-veined quartz found on the island of Viti Levu. If the search for gold is successful, Fiji will make rapid strides. And ethnographers should hasten to accompany the first miners, for

the inroad of gold-hunters will very soon deprive these islands of their originality: but the development of the country will be an advantage to geologists, for they will have easier access to territories which to day, with their wet impenetrable thickets, are beyond their reach.

Suva and district.

The island of Viti Levu, more than a hundred miles long, like the majority of those belonging to the Fiji group, is surrounded by a coral reef. At the S. W. projection of the land, in a deeply indented bay, lies Suva, the Capital of the Fiji Islands. Of the coloured row of houses standing on the shore, we are at first struck by the buildings of the New Zealand Steamship Co, the Bank of New South Wales, and the Bank of New Zealand. For a town of 1200 inhabitants, this collection of buldings is indeed surprising: but, as a health-resort and a place frequented by tourists, Suva could do with a comfortable hotel built of stone.

On the longitudinal line facing the bay, mountain chains with innumerable prominences compose several rows, giving one the impression that some Titanic force has crushed to half their height the hills created twice their present size. The most striking of the peaks is the «Devil's Thumb», with its unusual shape.

Looking seawards from the bay, we see only one island: but as we sail out into the open sea, three other islands rise to view.

The moment we arrive at the Fiji Islands, we set up for ethnographers. The native Fiji race is most interesting: of medium build, with well-developed muscles; with no inclination to get stout: both the women and the men crop their wavy black hair,* making it look like a

* The thick evenly cropped hair, which is about 4—5 inches long and combed upwards, reminds one of the «rococo» period, especially when we see hair white or light yellow from the «fixing» stuff used to

wig, and comb it. The members of both sexes hold themselves well, and their movements are elastic.

The moment we step outside the Capital, we see popular life in all its originality: e. g. 4 miles beyond Suva, we come across a native village, which is situated quite close to the brook Temaban. Before the houses peeping out from banana and cocoa-nut plantations, little



Group of natives in the Fiji Islands.

Fijians are scampering about in shoals: one of these small brown-skinned individuals beat the village drum* with two

keep it in place. All natives who are particular about their appearance, from time to time smear their hair with thick white «fixing» material: and after the paste has been washed off, the prettily shaped, dense tufts are of a yellowish hue, — hair thus turned yellow is generally dyed black. The wig-like head-gear suits a clean shaven face, — as Fiji taste actually requires, for the great majority of the young men are quite clean shaven.

* This «village drum» consists of a tree-trunk hollowed out in the form of a trough. Early in the morning and of an evening, far and wide round the villages may be heard the beating of the pseudo-drum.



Young Fiji girls: the one in the middle has her hair smeared with a wig-like white «fixing» paste used before dressing the hair.



Native woman, offering papaya fruit.

pieces of wood, another brought me cocoa-nuts, while a third invited me to his parents' house. Inside, the native houses, roughly constructed of beams and covered with rush-like plants and leaves, are roomy; they consist of a single apartment the floor of which is covered over with pandanus carpets. In the homes of the better-off natives, the head of the family or the members of the same sleep on a raised *daïs*. The hearth enclosed by stones too stands in one corner of the apartment; over the embers, in a vessel similar in appearance to the Roman earthenware jugs, yams or taros, which are grown like carrots, are crackling. The houses of the older style (most of them are of this description) admit light through the door (or doors) only. The whole building is kept together by threads of plaited cocoa-nut fibres or other material for binding: no nails are used.* Poorer families build a house out of £ 3—4.

The inhabitants welcome travellers with due calmness: anyone who appears at meal-times is invited to join the family; and the natives feel honoured if a white man gives them his hand or sits down with them on the rush carpet. There are generally a few chairs at hand on the beam, for the use of white men unaccustomed to sitting with crossed legs.

From Suva, viâ the district of the river Rewa, to Bau.

The Missionary School at Navuloa.

Tourists who stay at Suva generally visit the district of the river Rewa: the first halting-place is generally the hotel of the same name on the right bank of the river, which can be used as headquarters for further excursions. The carriage road, 12 miles long, leading to the hotel, passes through small tenant farms producing bananas,

* The same is the case on the island of Samoa.

rice, or vegetables, and then for some distance through a primeval forest.

In the Fiji bush, bryony predominates, interweaving the trees and shrubs, and forming arbours with its thin hanging twigs: in the vicinity of the less dense territories, cultivated by the hand of man, lemons and oranges are growing wild.

In the village of Nabuso, on the right bank of the



Outriggered Fiji boat.

river, about 2 miles from the Rewa Hotel, the native houses are well built.

To Bau, the former native Capital, we can go from the Rewa Hotel too, — by ferry to the left bank of the river, and from there 6 or 7 miles on foot to the island, half a mile long, on which Bau lies, which at low tide becomes a peninsula. I chose the longer, but more varied route by water.

With two companions I left Suva for Bau, by a steam boat of 10 tons' burthen. The little steamer made for one of the branches of the Rewa, sailing within the coral reef surrounding the island of Viti Levu. In shallower spots, the colour of the sea, in contrast to the dark blue deeper water all round, is light blue, green, bluish green like an opal, or brown. In calm weather, we can



Outriggered native sailing-boat, on the shores of the Fiji Islands.

see to the bottom where the water is shallow, and can make out the coloured fish swimming beneath the surface.

After sailing over shallow water, we entered a narrow winding waterway of the nature of a channel, which is flanked on both sides by succulent tiri bushes (*rizophora mangrove*). As these bushes, besides the ordinary roots, throw out hanging roots from their branches, they

constitute an impenetrable thicket. Beyond the wall of shrubs flanking the water, the whole country, as far as the eye can see, is covered with a motley array of tropical bushes; from the thickets the chattering of hidden birds may be heard, but, however much we strain our eyes, we cannot catch sight of the «Kikau», whose tones remind us of the thrush.

Before reaching the sudden bends, our boat whistled to warn the native craft to get out of our way. These outriggered canoes are truly in place in this bush district, which has not forfeited its primitive naturalness! The dark-skinned boatmen paddle on in silence, or, standing up, punt the old-world craft on their way with poles: their only clothes a kerchief tied round their waists, their heads are bare, but the rays of the sun cannot penetrate their thick hair worn like a wig.

Passing from the narrow brook to the river Rewa, for a little distance we sail against the stream: on the banks, the bush is replaced by cultivated fields. As far as the eye can see, bananas and sugar-cane plantations: here and there groups of cocoa-nut trees, which are however more for ornament than anything else, surrounding the houses, — for on the island of Viti Levu, cocoa-nut trees are not at all productive of fruit.

Just before the Catholic Missionary School of Wailili, on the left bank of the Rewa, we turned into a salt water stream leading north. For some distance along the banks of the latter we still find cultivated fields; at the stations barges laden with bananas are waiting to start on their way; while boats carrying fruit and fish are to be found at every step on the waterway. The native villages form picturesque groups of houses all along the banks; the population, young and old, come to meet the little whistling steamer, and, after a short conversation with the Fiji servant accompanying us or with the stoker, return to their wonted repose. The narrow waterway for a length of

about a quarter of a mile was made at the command of Thakombau, a Fiji king, to enable him to carry on war with the tribes living beyond the river Rewa.

We stopped at the Methodist Missionary school (Navuloa College) just before the salt water stream widens. In this College at present 112 natives who have finished school are being trained for missionary work. The only



Native village on the banks of the salt-water channel that empties into the river Rewa.

white apostle of the school, the Rev. B . . . , simply overwhelmed us with kindness: he showed us round the colony, the school and the living apartments. At the desks barefooted, well-built men were diligently doing their exercises; while another group of pupils were playing cricket in front of the building. The dwelling-houses have been built in native style, with the difference that they have

windows too. Married teachers and pupils live by families in separate houses: the unmarried men are located in larger houses, in groups. The paths leading to the houses are in many cases ornamented with shells and conchs, and the trees flanking the roads are also surrounded with shells, — this kind of ornamentation is a traditional Fiji custom, which the missionary in charge has very properly



Native pupils, before the school-house of Navuloa College,
on the island of Viti Levu.

adhered to. Under the guidance of Mrs. B . . . , the women are instructed in basket and carpet weaving.

The minister, as is generally the case with educated people settling in the islands, is a collector: his large collection of shells comprising numerous species would be a welcome addition to any museum.

On the way to the harbour along the marshy shore,

we saw little one-clawed crabs, whose claws are brick-red and not scarlet in hue, as were those of the crabs I saw on the island of Maorea (Society group): according to Mr. B . . . , farther inland, in drier spots, we can find here too a small species of crab with scarlet claws. The Fiji islands are also inhabited by a venomous species of worm, the centiped, but no other venomous creatures are to be found



Path, ornamented with conchs, leading to the dwelling-house of a native teacher employed in Navuloa College.

even on these islands. We stopped longer than we should have done; the ebb-tide set in, and our boat grounded: Mr. B . . . helped us out of the difficulty, sending a whole crowd of pupils, who soon hauled the little boat into deep water. We were then able to continue on our way towards Bau.

Hardly had we left the missionary school, when on our right, in the direction of the open sea, the island of

Ovalau rose to view, while to the left a small eyot was seen standing out of the «broads» (inland sea). Beyond the eyot the houses of Bau showed yellow.

To the unselfish endeavours of the missionaries, supported by the presence of warships, is due the fact that today, both in the Fiji Islands and in the greater part of the South Sea Islands, cannibalism is a thing of the past. But the first step towards the creation of friendly relations with the natives was really taken by the whalers and traders who married native girls and thus created ties of blood.*

Bau, the ancient native Capital.

In the middle of last century, during the reign of Thakombau, the Fiji king, the population of the town of Bau was 5000: today this number has shrunk to 215 natives and the family of the missionary. The little town, which stretches down from the hill side to the bay, has been enclosed all round the shore by large flat stones: the huge slabs were brought, by the orders of the Fiji chiefs, from the neighbouring coast, where there is a plentiful supply of stones of this kind, — probably on rafts, for any other craft would have grounded in the shallow water, with so heavy a load.

The row of houses of the picturesque little town-ship, of plaited leaves and rushes, is brought to a conclusion by a wooden house which is quite out of place

* Tourists who are quick to form an opinion, seeing the conditions of public safety and the church-going natives, are at first inclined to give the missionaries all the credit. But according to the white men who settled here long ago and have seen every period of development of the various groups of island, the case stands otherwise: the sanctity of other people's property, the binding nature of a promise, were better respected by the inhabitants of the Fiji, Samoa, Tonga Islands etc. of former days than now. Converted natives are often «hypocrites». I have so many reliable authorities for these statements that I must accept them — partly at least — as truths.

here, — this is the house of Prince (or, as they say here, Ratu) Kadavu (pronounced Kandavu) Levu, the grandson of Thakombau, built for the reception of European visitors.

Owing to the shallow water, we had to land one by one in boats, — hurriedly, as we wished to take a few photos before sunset. The inhabitants of the Fiji Islands are only too glad to «pose» before the camera, —



Bau, the former Fiji Capital. To the right, the house of Ratu Kadavu Levu.

not expecting a tip for their readiness, as is usually the case in other places frequented by tourists. After taking groups, we walked round the township, the finest building of which, the «town-hall» (*vali veibosi*), stands on an elevation: to the left of the steps leading up to it we see the anchor of the sailing vessel «Manila» captured some 60—70 years ago, — the crew of which were killed and eaten! To the right of the steps stands a column-like

stone, which, in the days of cannibalism, was used for the execution of the victims. In the «town-hall» we were received by the «elders» of the place: we took our seats on the pandanus carpets, and, with the help of an interpreter, the usual flood of questions and answers was started. In the meantime one of the natives began to prepare «Kava».*



The «town-hall» of Bau.

While the «Kava» was being got ready, dumplings made of boiled yams and taro, swimming in cocoa-nut

* This beverage is prepared from the root of the *piper methysticum*. In Fiji the root is grated, in the Samoa and Tonga Islands, it is ground. The powder thus obtained, which looks like sawdust, is dissolved in water. Indulgence to any extent in this biting, sharp beverage, which looks like dirty water, has an intoxicating effect, — only «kava» does not go to the head, but to the feet, which it paralyses for an hour or two.

milk, were served up on large green leaves that looked like lettuces. When the drink was ready, for decency's sake we tasted it: then, taking leave, continued our round of the township. The worthy parson showed us his collections, and, when he saw that I was interested in minerals, presented me with a few specimens of the local ones.

In the evening, at our request, a dance (meke) was arranged: as the grown-up girls were, with but few exceptions, absent at work, steps had to be taken to replace the missing ballerinas. From 5 to 9 p. m., a dress rehearsal was held: and at last, on our pressing the matter, the dancers appeared in the Ratu Kadavu Levu's drawing room (in native style). They sat down in two rows with legs crossed, on the pandanus carpets, — and the «meke» began. Before dancing, they sang ancient songs, and new texts (about the Russo-Japanese war, the telephone etc.) to old airs: the tunes were monotonous, but they kept perfect time. Among the women singers I thought I made out several voices that would deserve to be trained. While dancing the songs are accompanied by movements of the arms and upper part of the body. The best dances consisting of movements and postures of this kind were learned from the Samoans.

It was late before the display was finished.

My companions slept at the English house of Ratu Kadavu Levu: for my own part I chose the native one for my quarters for the night. I threw myself down on the cool mat-like pandanus carpets, — and must confess it was better lying on them than on the worn-out spring mattresses of the Suva beds.

We were astir very early next morning: the prince's cook provided us with a good breakfast, and after we had made a hearty meal we started to cross the stream flowing through the bush and the shallow inland sea with its coloured fish, and in a few hours were back again in Suva.

Ratu Kadavu Levu was educated in Australia; he speaks English perfectly, is very attentive and friendly,

and is no enemy to spirituous liquors, is, in fact a gay boon companion, like Hinui, the prince of Tahiti. But he has not yet adopted European dress; he goes barefooted, and, like his compatriots, winds a dark blue or coloured cloth round his waist, though the upper part of his body is covered with a European coat, and on his closely-cropped head he wears an English cap.

From Suva to the Navua sugar plantation.

(21 miles.)

In the Navua valley.

A small steamer runs every day from Suva to the Navua sugar plantation, about 21 miles to the S. W. I started in calm weather, and was able to enjoy the sight of the open aquarium of the large ocean, from the bows of the boat: long-bodied, long-nosed silver fishes were gliding like arrows away from the ship, while one or other of them, in a fit of good humour, shot up for a few feet out of the water, and skimmed the smooth surface once or twice ricocheting like a stone; tiny blue fishes showed like sapphire spots amid the corals; while deeper down, here and there large fish were resting, in melancholy motionlessness.

Along the shore here and there a native house peeps out from the dense bush: in one spot I saw pastures too on the hill-side, but otherwise, as far as the landing-place of Navua, the whole coast-line is in a primitive state of unpracticable wildness.

From the landing-place we passed through the sugar plantation to the hotel, half a mile distant. On the road convicts were cutting the weeds with large knives. In the South Sea Islands in general, scythes and sickles are replaced by strong knives a few spans long, with which

the thick-stemmed weeds or the luxuriant fern-like grasses are more easily disposed of.

My luggage was carried by a nice-looking local Fiji athlete, who spoke broken English: on the way we arranged for him to come next day with a companion and row me up to the village of Benda among the hills. Punctuality is not a strong point with the natives: instead of 6, they came at 8; and we started with provisions for two days. My friend of the day before stood in the bows; his companion, the «King of Benda» as the former would call him, went to the stern: then both set to work to «punt» with pliable but strong poles some 12 feet long; they worked so hard and so vigorously that, although we were proceeding up stream, the craft moved very rapidly.

For some distance we wound through sugar plantations; on the high banks of the river, cottages inhabited by Indian coolies peep forth from the edge of sugar-cane fields. Despite the early hour, Indian women, with coloured head-coverings, and bracelets on hands and legs, but otherwise carelessly dressed, added to the colour of the scene.

As soon as we left the sugar plantations behind us, the right bank of the river gradually became more hilly: the hills are covered with bush interwoven with bryony, while here and there near villages, bananas and yams are grown. After punting for two hours and a half, we began to glide on through mountains, between which the river bed was wedged.

This journey through low lying mountains reminds one of the Wanganui route in New Zealand: here the vegetation is more varied, but the omnipresent bryony renders the district more monotonous than the Wanganui Valley, in which, in places, a group of ferns is succeeded by bush and more barren territory. In the Navua Valley the only line of rocks we find — the side of the primeval lava stream — is on a level with the water: the slopes of the hills are covered with dense bushes; down the thicket-

grown hill-sides waterfalls are trickling, and only one of these falls has been able to find an opening for itself to the delight of tourists.

The river completely fills the valley: the slopes are so steep that not even a footpath could be made without a great expense in blasting. Here and there we find large lava and conglomerate rocks in the river bed.



Raft (mbili-mbili) of bamboo in the Navua Valley, on the island of Viti Levu.

There is very little life in the valley: occasionally we meet a *mbili-mbili* (raft) of bamboo carrying bananas, or a native harpooning fish. We also took a harpoon with us, with which the «King of Benda» succeeded in «sticking» a medium-sized eel.

My men did their work with remarkable power and endurance; they shoved and pulled the boat over the rapids standing up to their waists in the swift stream; several

times I told them to take a breather, but the answer was always that they were not tired; we stopped half an hour for lunch, and arrived at Benda at 5.30 p. m.

They pulled the boat over 20 rapids altogether against the stream: and only once was I obliged to land. Benda is situated 10 miles from the hotel, in a straight line: but if we take into account the windings of the river, we must



Over the rapids of the Navua.

have gone twice the distance, against the current, over 20 rapids, in eight hours and a half! A splendid performance, — and yet there are people who declare that the Fiji natives cannot compete with white men in point of endurance. I agree that the average, inexperienced native with an inclination to laziness is inferior to a white man; but he must be a very stout fellow who would compete with experienced Fiji fishermen in rowing.

The inhabitants of Benda (as indeed of practically all mountain villages) are not cleanly: but they gave me a hearty welcome, offered me yams and «kava», — and smoked my cigarettes. The «kava» was drunk with a fair amount of formality. As soon as the chief of the village had drunk the first draught served in a cocoa-nut shell, everybody started clapping and said «ā madā» (empty):



Fiji boat hewn out of a tree-trunk.

the other drinkers were not clapped, but the «ā madā» was repeated.

Formerly the cup of «kava» offered to the guests had to be drunk to the dregs: and even today the natives consider it proper to drain the cocoa-nut shell to the last drop. I did not follow this custom, and did not drink from the cup which was passed round. Had I done so thirty years ago, the two old hawk-eyed beldames and the three ancient

mountaineers who must have been as old as Methusaleh, would certainly have set to work upon my ribs.

It was arranged that, besides my men, only the chief should sleep in the house with me: we went to bed about 11 p. m. As pillows are unknown quantities in Fiji houses (especially in such out-of-the-way places) I folded my coat up and put it under my head, while my companions laid their thick-haired heads on bamboo footstools with feet 3—4 inches high at either end. Scarcely had I dozed off when I awoke to the sound of whispered conversation and the crying of infants. The whole «kith and kin» had stolen in!! Well, it was my turn now to slink out, and not to return until the crying and whispering had ceased.

Next day we started back. The transit of the rapids down stream was extremely amusing: on one occasion we headed the boat four times at the stream rushing between the rocks, but had on each occasion to turn back, for the current threatened to dash the craft on the rocks; but at the fifth attempt we got through safely, only shipping one fairly large wave.

In the morning, with the weather changing from rain to sunshine, there was far more bird life in the dark green bush than on the previous day: we often heard the voice of the crooked-beaked kikau; now and then wild doves cooed; dark green and red native parrots (in Samoa very valuable for their feathers) flew from bush to bush; stunted-tailed swallows could be seen in large numbers; while in inhabited spots, the miner bird, the unfailing denizen of the island, appeared on the scene too. On the banks of the river I only saw a few dark grey and white herons, which in their search for fish are fond of settling on coral reefs too at low tide.*

* I saw herons of the same species and colour on the Cook and Samoa Islands too.

Shark-hunting in the Bay of Suva.

Sharks, which are at home everywhere in the South Sea, visit the Bay of Suva too. On three occasions I tried my luck in this bay as a shark-hunter, but only once did I succeed in making a catch. On this last occasion no



Shark 10 feet long caught in the Bay of Suva.

sharks appeared till the afternoon: then in intervals of a few minutes two were «hooked».

The first one got away and took with it the badly set hook: but after a short interval the rope hauled by the boat in motion again tautened. We stopped; the shark had already fastened on to the hook which was provided with bait: we began to draw him in slowly; he resisted, then began to swim off sideways: as he went away again

and the rope tightened, we could be quite sure that he was on the hook, so we started to pull the rope in with all our might, — and with it came a big fish 10 feet long. As soon as he came to the surface, I gave him a 12 millimetre revolver bullet. For a moment he was too much for us; then we drew him to the surface again, and I put another bullet into him, and then a third: finally his struggles became so feeble that we were able to think of tying him to the side of the boat. Even now we could not manage him, for his enormous weight pulled the boat down sideways, and he got enough water through his gaping mouth to keep the life in him.

Trusting in our luck, and hoping that a third shark would bite, we resolved to do for the creature at once, as it was late already. It occurred to the Fiji fishermen accompanying me that it would be a good idea to lift the shark into the boat where he would soon die, and so we could continue our sport. They used every effort to carry out their plan: but the huge fish was too much for them. Pleased by their enthusiasm, I myself set to work to help them. We almost upset the boat, but we could not manage to haul him in, — rather lucky for us, for he would probably have dashed the craft to pieces with his writhing efforts.

The two sharks had gone for the bait so daringly and within such a short interval of one another that, had time allowed, probably a third would have come too. It seems that sharks also have a special time for «biting», depending upon weather, tide, and a combination of other circumstances.

Two small dark brown fish, a span long, clung to the side of the shark: when, in default of a net, we reached after them with our hands in an attempt to catch them alive, they swam further away, to another part of the shark's body, which they did not leave finally until we raised it up entirely high and dry.

Englishmen call these little fish «suckers», and believe that they guide the sharks to their prey.

The man-eating monster, on being hauled ashore, was surrounded by an interested group of natives: and when I told them they could do what they liked with it, they cut it up, and everybody took a supply of shark flesh sufficient for a meal or two.*

On the Island of Ovalau.

(Suva to Levuka, 54 s. m.)

Excursion to the Lavony Valley.

Until 1889, the Capital of the Europeans residing in the Fiji Islands was Levuka, a town on the island of Ovalau, to the N. E. of Suva. As Levuka is some 54 miles nearer to Vanua Levu, which produces sugar, cocoa and tea, to Taviuni with its plantations of cocoa-nut trees, and to several other islands, than Suva, even today it is an important commercial centre. Ships bound for Sydney and Auckland stop at Levuka too: besides there is a local service of boats between Suva and Levuka.

The latter town occupies a valley on the eastern side of the island of Ovalau, surrounded by a crescent-shaped range of hills with broken ridges: the main row of houses of this small town with its 500 inhabitants, containing the shops, two hotels, and the building of the Bank of New Zealand, faces the sea: behind the first row of houses, on a hill slope, lie the villas, which are adorned with gardens and groups of palms, while the hills in the back-ground are overgrown with primeval vegetation. On the broken ridges, barren sides and rocks jut out.

The highest peak is only 2089 feet; but in proportion to the tiny valley, even this is a sufficient elevation.

* Shark flesh is eaten in the Samoan, Tonga and the other South Sea Islands too.

The whole prospect makes Levuka a charming spot. In cool, clear weather, from Levuka we can see 7 islands, of which 3 are within a distance of 9—13 miles, while the other 4 are much farther away. The hills on the sea side are sharply broken volcanic stone and lava, of a composition similar to that of cement, by the aid of which the footpath leading several miles both N. and S. is kept in repair.



A siesta in the company of natives of Ovalau.

A favourite resort of tourists in the Lavony Valley, which can be reached by a climb of a few hours over the hill lying behind Levuka. To avoid the climbing over steep ascents, I took horse, choosing the longer but more comfortable route to the valley.

The first thing that struck me was the number of holes burrowed by land crabs at the side of the road.

The crabs did not appear till towards evening, hurry-

ing sideways into their holes, as I had seen them do in April in the Cook and Society Islands. They are about the same size as the latter; but their colouring is different.

While passing under a tree, a cobweb wound itself round my neck: in point of resistance, its threads were far stronger than those of the ordinary spider's web. The weaver himself was a yellow big-bellied creature, of the size of a bean: his dark-coloured legs were a sharp con-



Native man in primitive costume, in the Lavony Valley.

trast to his light body. Later on I found many spiders of a similar size, some with yellow, others with white bellies.*

* Large spiders of an almost similar species are to be found in the Hawaiian Islands too. Another lemon-coloured enemy of the mosquitos and flies, a small species of lizard, is also found in large numbers in the Fiji Islands; I often watched the black-eyed little reptile with its piercing gaze, from the terraces of the hotels. Of an evening it lies in wait for mosquitos near burning lamps; at the approach of a rival, it

In every one of the crescent-shaped valleys skirting the shore, amid plantations of cocoa-nut trees and bananas, we see native villages: round the graves situated near the villages, as a rule by the side of the road, stones are piled; while notable chieftains are buried in the middle of the village. On the island of Ovalau we find houses with walls made by ramming, which are better able to resist the ravages of the hurricanes that often visit the island.



School children, in the Lavony Valley.

The inhabitants are very hospitable to travellers: on request they are very pleased to offer antiquities for sale. Pearls too may be had from lucky finders; they are gene-

raises its tail and goes through a number of serpentine movements with the same, and if the rival ventures nearer, it utters a kind of squeak; when quite close it is said to bite off the brittle tail of its fellow. Yellow lizards of this kind are to be found practically everywhere in the South Sea Islands.

rally quite small, though large specimens were also shown to me, and offered at a large price.

The men engaged in exterminating shrubs or weeds or in cutting grass and lopping trees, appear armed with large knives two spans long. Travellers of an imaginative turn of mind might be alarmed at meeting natives for the first time in this manner: but tourists acquainted with the peaceful natives of the Fiji Islands simply takes his seat



Native «beauty».

in their midst: before long a few young cocoa-nuts are produced; the knives are used to slash off one end; and, after slaking our thirst with the sweet refreshing juice, we proceed on our journey. In return, we offer the adults of both sexes tobacco, and, before starting, thrust a shilling or two into the hand of the cocoanut-dealer, — a process by which we gain their respect and sympathy, especially if we add to the pleasure of the gift by shaking hands with them.

The crescent-shaped valleys, like those of Levuka, are surrounded by broken-ridged, boldly formed hills overgrown with shrubs. On the sides of the hills and in the well-watered valleys, grass reaching to one's knees is growing: and taros and yams for domestic use are cultivated.

Leaving the shore, we entered a broader valley that opens towards the interior of the island: we must have traversed about another 4—5 miles, — for the last half



«Skerry» between the islands of Ovalau and Maturiki.

hour I myself too went on foot, for in the steep places I found the damp red clay offered no sure footing to an unshod horse. The sides of the hills flanking the large oval-shaped valley were covered with shrubs and ferns; in the distance, among dense green foliage, a little brook was sparkling; in the direction taken by its course, a narrow side-valley opens on to the sea. Through this valley we caught sight of three islands, beyond which, at

a more remote distance, could be seen the hilly eastern shores of Viti Levu.

To judge by the steep walls all round and by the shape of the valley, this large cauldron must once have been a crater.

At the bottom of the valley stretches a long native village. The first native to appear before me, with his «lico» plaited of rushes and joined by a green leaf worn round his waist, presented a picture of the primitive Fiji costume: I stopped in front of his house and took his photo. Through the door of the school the small fry of the village observed the «foreign» photographer, trooped out one by one, and stood in a row to be immortalised for the benefit of posterity. When the school hours were over, they joined me in the company of a missionary teacher; and on a map I found ready to hand printed in Fiji I showed them where I came from, — they were quite at home in geography! With my escort I walked round the village, stopping at the better-class houses and where I saw groups of Fiji beauties: and at last we repaired to the missionary's house for a rest.

When I started, the whole escort followed me: and, on reaching the end of the village, they struck up some English air, — the smaller children taking the treble, and two bigger boys supplying the other parts. It was delightful to listen to. «I should like to hear a Fiji song», I said. «We can't sing any such song walking», was the answer: «we must sit down to it.» As I was refreshed enough, I had to do without the Fiji melody for the time being.

It was nearly evening when we reached home. As soon as we had passed the house of its native owner, my horse turned back, and nothing would induce it to continue the journey to Levuka. My man thought it was only natural as «this is the horse's home», he said. As I had no spurs, I was obliged to «pass the Rubicon» by leading the animal; and so I managed to return to Levuka as I had

left, — on horseback. On one fine day I rowed round the island of Ovalau: for some distance to the north, there is a repetition of the short crescent-shaped valleys, farther on they become elongated in form, and are at the opening very often divided in two by a «partition» mound. From its north-eastern to its south-western corner, the island expands. From one end to the other, the broken hill-sides consist of a conglomerate of broken fragments of stones.

Parallel to the western shore of Ovalau, and quite close to the same, lies the island of Maturiki which looks like an elongated mound. Between the islands is a shoal, in the centre of which a mighty «skerry» stands prominently out. At the top of this rock is a solitary cocoa-nut tree, by the side of which a stunted, thickly-foliaged tree may be seen. From the crest bryony creeps downwards, covering one side of the rock. As we approached, from a cave-like opening on the «skerry» grey and white herons appeared, then took wing and after wheeling about for a short time settled on the branches of the spreading tree, where they may rest in perfect security, for very few men would venture to climb the precipitous sides of the rock to plant cocoa-nut trees or catch birds.

In about 20 valleys all round the island I saw altogether 16 native villages and a few houses inhabited by white men. We rowed round the island 30 miles in circuit in a heavy boat with four oars, in 9 hours, including the hour required for lunch and the time spent in photographing: — it must indeed be a stalwart athlete who would surpass the Fiji native oarsmen.

On the coral reefs of the islands of Viti Levu and Ovalau.

Most of the Fiji Islands, which are of volcanic origin, are enclosed by coral reefs: as in the case of all islands of similar construction, the Fiji group too is surrounded by

reefs at very different distances from the shore. Sometimes they enclose one island only, at others several: e. g. Viti Levu and Ovalau are encircled by one continuous coral reef.

The outer edge of the reef, owing to the larger quantity of chips washed on to it by the waves, is more elevated than the inner ring, and as it drops suddenly, the water beyond it is quite deep. The shallower water within



Reef-hunters on the island of Ovalau.

the reef is of a light green or bluish hue: the light coloured surface is studded with brown spots, — the reflection of groups of coral lying close to the surface. Not everywhere do the coral reefs constitute a connected whole: in places, particularly where rivers flow into the sea, deep channels and bays intersect them. Suva, the Capital of Viti Levu, and Levuka, the Capital of Ovalau are situated beside channels of this kind. At low tide, the inhabitants, particularly the women

of both islands row out to the reefs to collect shells or catch small fish.* These visits to the reefs, repeated day after day, are beginning partly to deprive the reefs of their originality, by robbing them of shells, one of their chief ornaments, though we still find numbers of polyps and other coral-producing animals, sea-cucumbers, dark blue five-armed stars, bristled creatures, spiders etc. on the coral wastes.



Coral reef near Navua, on the island of Viti Levu.

I inspected the coral reef near Navua, on the island of Viti Levu, near Levuka, on the island of Ovalau, and in several other places round the island. At low tide the reef near Navua is a huge, bleak waste, composed by a mass of dead coral rock broken by the waves and formed into

* The same is the case on all of the South Sea Islands surrounded by coral reefs.

a compact body: I saw comparatively little living coral, only on the sides of crevices and cracks full of water.*

In the transparent blue waters of the cracks, there is a life similar to that in aquariums: from the fissures and crevices in the coral field, tiny fish of sapphire, yellow, and other colours dart forth. If we watch them quietly, they swim quite close to us: but if we make any rapid movement, they glide into the numerous cracks, and after a short interval appear on the scene again. Around these fissures the coral world seems all alive: the murmuring and puffing waves come and go, pressing air in and out of the crevices in the coral rocks with a sound as of a sleeping giant dreaming long dreams.

The living coral stems, formed like sponges or with innumerable branches, as they receive a continuous supply of water through the cracks, live on. The living part, which sticks like gum, is for the most part of a brown hue: here and there we see violet, pink and white many-branched coral stems, — but only in small and scattered groups.

* Coral is generally supposed to be the house inhabited by the living animal: but this is a false idea. The polyp, hydroid or bryzoid which forms coral, secretes the skeleton of carbonate of lime from its own organism in just the same way as animals of a higher grade do bone. In the case of coral-producing animals, death keeps pace with life: the living individuals continue the work of increasing the skeletons of their dead predecessors until farther development is put an end to by unfavourable external circumstances, — e. g.: the sinking of the earth 22—25 yards below the level of the sea, for on reefs 22—25 yards below the surface of the sea or on such as are exposed for any considerable time to the air, these animals perish, as is the case too in spots where sweet water pours in to the sea, where the creation of coral ceases (after J. D. Dana, «Corals and Coral Islands»).

CHAPTER IX.

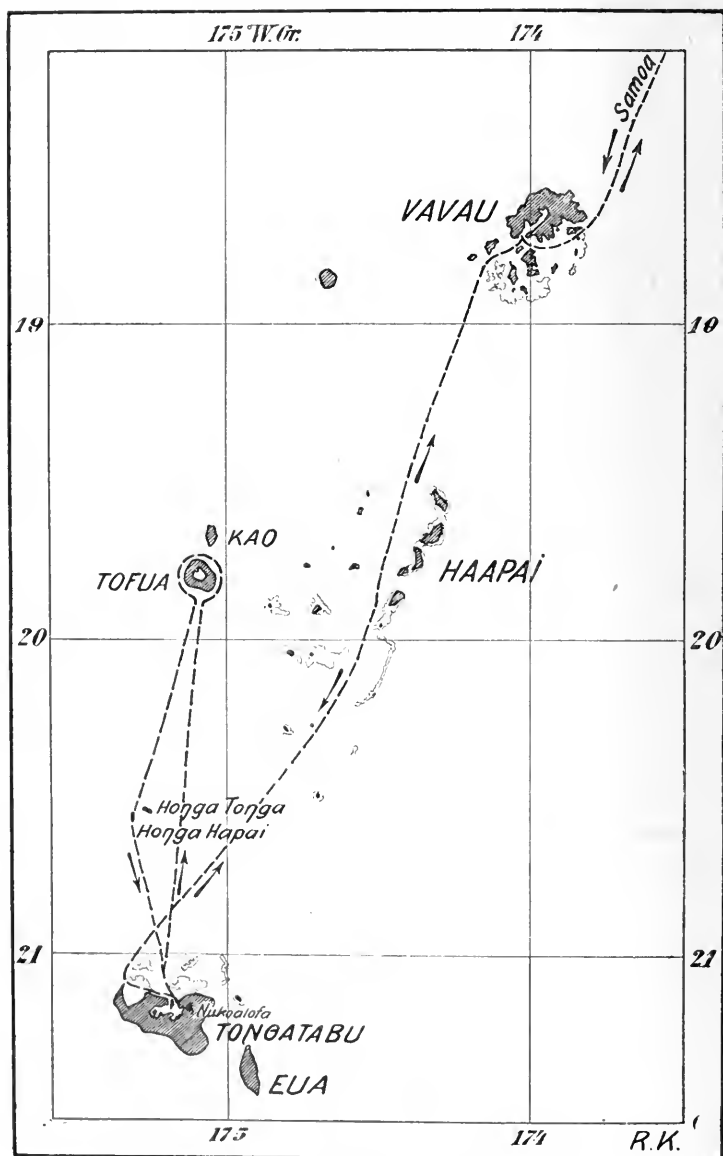
THE TONGAN GROUP OF ISLANDS.

From Suva to the Tonga Islands viâ Apia.

(From Suva to Apia, the Capital of the German Samoan Islands, 667 s. m.: from Apia to the island of Vavau in the Tonga Group, 350 s. m.)

We left Suva in the morning of Aug. 4., by the S. S. «Navua», of 3000 tons' burthen, belonging to the Union Steamship Co. Together with its sister ship, the «Atua», the «Navua» runs once a month between Sydney and Auckland, touching at the Fiji, Samoan and Tonga Islands.

Before arriving at the first stopping place, the town of Levuka, we witnessed a rare sight. On the open sea we caught sight of a solitary whale, and from the same direction, wherever the whale turned, another huge fish leaped out of the water, causing a tremendous splash as it fell back again. As I was informed by our captain and, later on by several other people, it was the trusher pursuing a whale. When the latter comes to the surface to take breath, the trusher throws itself out of the water and dashes with all its weight on to the whale. The connection between the trusher's pranks and the coming to the surface of the whale is proved quite convincingly by the fact that, from the moment the trusher appears, the spouting of the whale is no more seen, it probably vanishes in the huge quantity of water stirred into motion by the action



Map of the Tonga Islands.

of the trusher. The trusher is said to be assisted by the sword-fish, which stabs the helpless whale from underneath.

We came to anchor at Levuka. As it was Sunday, the inhabitants of the island Ovalau, who belong to the English Established Church, did not start loading and unloading until after midnight, — i. e. on Monday morning. The work lasted till 9 a. m. on the 5th, when we started half a day late.

By the evening of the same day we saw altogether 20 islands belonging to the Fiji group: and on the 6th, the island of Niuafoou (Good Hope), 344 sea miles from Levuka, rose to view on the horizon. This solitary island, the northernmost of the Tonga group, lies about 100 sea miles from the main group.

On the morning of the 7th, we were sailing N. E., in a hazy atmosphere: and about 11. a. m., we approached two of the main islands of the Samoa group stretching from E. to W.

To the left Savaii, to the right Upolu, and between the two larger islands the smaller ones of Apolima and Manono and a few insignificant «skerries» could be seen. The extinct crater of Tofua, at the S. E. corner of Savaii, and the crater island of Apolima point to the volcanic origin of the islands. The amphitheatre-like crater of Apolima, open towards the North, is occupied by a Samoan village peeping out from amidst palms.

Apia, the Capital of the Samoan group, — a German Protectorate — is situated on a promontory at the northern end of Upolu, beside one of the deep-water channels crossing the coral reef that surrounds the island in a zig-zag line.

After a sojourn of 27 hours, we sailed on from Apia in the afternoon of the 8th, to the S. W. towards the Tonga Islands. As the evening closed in, the volcanic district at the N. W. end of Savaii, which has been in activity since 1905, shone like a column of fire.

On the 9th we left the cone-shaped volcano of Tofahi to the W., and on the 10th, in the morning, we arrived at Vavau, one of the Tonga Islands situated 350 sea miles from Apia.

The Tonga or Friendly Islands.

Short general description.

The Tonga* or Friendly Islands are situated between latitudes 18 and 22° S., and longitudes 174 and 176° W. Notwithstanding this fact, with a view to the commercial connexions with Australia and New Zealand, time is reckoned in the Eastern manner.

According to a rough estimate, the aggregate area of the 100 islands must be between 450 and 500 sq. miles. On the largest island, Tongatabu, there are about 80,000 acres of cultivable land: the next largest islands to Tongatabu are Vavau and Haapai; and the smaller islands — e. g. Tofua, Kao, Namuka, Eoa etc. — vary in area between 5 and 7 square miles.

The climate is practically the same as in the Fiji Islands.

According to the Census of 1905, these islands are inhabited by 21,000 souls, of whom 19,500 are natives, the rest being emigrants from the neighbouring islands, Europeans, or half-breeds. Europeans often intermarry with the natives, who belong to the Wesleyan sect. The natives of Tonga, who are of the Polynesian race, remind one of the Maoris of New Zealand, though they are smaller in stature and more neatly built. and stand nearer in this respect to the Samoan race. From time immemorial the Tongans have visited the neighbouring Fiji and Samoan Islands. According to reliable sources, a few centuries ago

* The natives pronounce " as *ng*: consequently the word Tonga is written «Toga».

the peaceful inhabitants of the Tonga Islands acquired warlike accomplishments from the Papuan tribe of the Fiji Islands, and were instructed in the art of music by their Samoan kinsmen. Today, the services of steamers connecting the various groups of islands enable Tongans to go to the Samoan or Fiji Islands in search of work or to visit relatives, — and *vice versa*. In this manner the inhabitants of the various islands separated by distances of several hundred miles get to know each other's customs quite as thoroughly as immediate neighbours on the continent . . . The more catching strains from Samoa or Hawaii are taken by the first ship round the island world of the Southern Pacific, forming the closest ties of sentiment between the kinsmen living so far apart.

Children are obliged to attend school between the ages of 7 and 16. Free education is supplied first and foremost by the State: besides State schools, the young folk of the island receive instruction in denominational schools too. To the credit of the latter be it said that they do much to develop the musical talent inborn in the young Tongans. The average Tongan has a very good idea of the elements of singing: and in Nukualofa, the Capital, there are two native brass bands.

One half of the population are Roman Catholics, the other half Wesleyans. George Tubou II., the present King of the Tonga group, rules under the suzerainty of Great Britain. The Parliament consists of 62 members — 31 hereditary chiefs, and 31 deputies elected for periods of three years. On June 18, 1907, on the occasion of the 33rd birthday of the King, the hitherto defective laws were added to, many sound measures being passed in the field of criminal law in particular. The statute book, which has received the royal sanction, has already appeared in print, — in English and Tongan.

From the island of Vavau viâ the Haapai Islands to Nukualofa, the Capital of the Tongan group of islands.

(210 sea miles.)

In the morning of Aug. 10, we arrived off Vavau, the northern group of the Tonga Islands, 350 sea miles



Dwelling house with side walls of plaited cane, on the island of Vavau, with a native girl standing in front of it (Tonga Islands).

from Apia, the Capital of the Samoan Islands. After passing several smaller islands, we sailed up a deeply indented bay of the main island of this group. The former, which look like ridges of hills, as well as the main island itself, are covered with *tiri* shrubs (*risophora mangrove*), with tropical plants and cocoa-nut trees. At the head of the bay, the water in which is deep, stands the excellent harbour of the island.

The houses along the shore, standing on the side of a hill and built of wood with galvanised iron roofs, reminded me of the buildings in New Zealand and Australia. The royal palace of Vavau with its wooden walls is situated quite close to the harbour.

Beyond the «white» quarter, we come to the houses of the natives with side walls of plaited cane or leaves: even native houses built of wood are not rare. The roofs



Coral shore of the island of Vavau, full of fissures and caves.

are for the most part covered with bamboo leaves. The uniform style of house building in vogue in the native villages of the Fiji or Samoan islands is not to be met with in the Tongan Islands: here, having regard for the cold nights of winter, the primitive, well-ventilated houses with their side walls of plaited cane or leaves are becoming rarer, — a fact that is gradually depriving the seashore villages of their originality.

From a hill («prospect hill») 4 miles outside the harbour we get a good general view of Vavau and the smaller islands round it. The road to this hill leads through underwood.

On the splendid fertile soil stretching all round, everything grows luxuriantly: amid the dense bush of an angry green hue we see trees laden with cocoanuts. We often hear the thrushlike tones of the *kikau* bird. From the bush we find ourselves all at once on the hill: all round, from every side, fjords wind towards the interior of the island; and the tiny eyots encircling the mother-island lie so close to the fjords, that they seem actually to form constituent parts of the same. The European houses on the shore are conspicuous: but the native houses cannot be seen for the thicket, and the general impression gained is, not that we are in Tonga, the only kingdom in the Southern Seas that has retained its independence, but that we are enjoying a view of some bush district inhabited by white men.

From top to bottom the «prospect hill» 450 feet in height is a coral rock: the light green and blue sea water round the shores of the fjords also points to a coral bottom. Yet the Vavau islands were brought to the surface by volcanic forces.

The forenoon was spent revelling in the prospect: in the afternoon we rowed 3 sea miles from the harbour to visit one of the caves of Vavau. Along the sides of the said cave, the coral rock forms a high steep shore, broken here and there by large fissures and smaller cave-like openings. As we rowed into the cave, the dark-coloured sea water, hitherto a thousand feet deep, suddenly became 100 feet in depth. By sunlight, the bottom which is white from fragments of coral and shells, lends the inner stretch of water an azure blue colour. On the sides of the cave about 80 feet high, stalactites have also been formed. The arched roof is denizenized by hundreds of bats.

There are several caves on the island of Vavau: but the finest ones cannot be visited without risk, for, as their entrance is below the level of the sea, they can only be approached by diving, a feat which, owing to the coral rocks, cannot be attempted except by very experienced divers.

We waited for the flood tide, and left Vavau at 11. p. m. In the morning of Aug. 11., we were off the Haapai Islands, 80 miles further on. The five main islands of this group stretch for a length of 23 sea miles. Beyond the palm-covered coral islands, which are almost on a level with the sea, may be seen Kao, of the shape of a perfect cone, and the smoking Tofua, both of volcanic origin.

Ships do not venture to enter the harbour of Haapai except in the daytime: the shallow bay is full of dark spots (coral).

Here too, as on the island of Vavau, the first thing we are struck by is the wooden houses of the whites. Haapai too has its royal palace built of wood: but the life of the natives is far more striking in the interior of the island.

Starting on the afternoon of the 11th, by about 9. p. m. we were in the vicinity of the smoking volcano of Tofua and the extinct crater of Kao opposite. In the morning of the 12th we came to anchor at Nukualofa, the Capital of the Tonga Islands.

On the island of Tongatabu.

Nukualofa, the Capital of the Tonga Islands. Excursions on the island.

The harbour of Nukualofa is protected by a coral reef 8 miles distant from the shore. Entering one of the natural deep water channels of the reef, we sail up a stretch of water 15—25 fathoms in depth, towards the harbour. The shallow inner water is full of coral banks,

which are a perpetual menace to shipping. In the day time sailors are warned by the 28 palm islands scattered inside the reef and by buoys marking the shoals: the security of navigation at Nukoalofa at night is of course just as problematical as it is at Haapai. In other respects this third harbour is merely a repetition of the other two, with this difference, that here the shore is ornamented by a line



Royal palace of the native king, George II., in the town of Nukoalofa, on the island of Tongatabu.

of mighty pine-trees, beyond which we see the one-storied wooden residence of King George II.

When the barriers were thrown open, the inhabitants swarmed over the well-built stone molo (pier) that stretched about 200 yards out from shore. Owing to the coolness of the weather, they were all wearing overcoats and upper garments: but most of them had tied to the kerchiefs round their waists a «taovalu» plaited like a Panama hat, —

a mixture of modern and ancestral costume that was anything but in good taste.

I put up at the well managed Royal Hotel, close to the harbour.

Starting from the Capital we may drive in both directions right to the end of the island, which is 32 m. long from E. to W. and from 1—8 miles in breadth. The island is covered with underwood, and, as palm trees have been planted among the underwood, it is only here and there that we find well cultivated little clearings, where yams or bananas are grown. The native villages generally consist of rows of houses widely separated from one another standing on either side of the road; around the houses are lawns; and as, towards the end of the month, all the inhabitants are, under pain of punishment, obliged to sweep the vicinity of their respective houses, at such times the villages wear the appearance of so many parks.

Here too, as in the South Sea islands, we find graves near the houses. The graves are enclosed with piles of coral, conchs, and empty glasses: and, on the occasion of the funeral, flowers, garlands of flowers with mat-like fringes, or baskets woven of palm-leaves are placed on the last resting-place of the deceased.*

During the day-time the young people capable of work are busy in the plantations, while the women are engaged at home making tapa mats. For the latter purpose the bark of a shrub called the «hiapo» is used, which, while wet, is battened into the form of a broad ribbon with wooden weights. The ribbons are then pasted together in different sizes and painted, and the «tapa» thus procured

* In the newly-plaited palm-leaf basket first sand is taken to the grave: and then the basket is put in its place, empty. Graves covered with sand are considered ornamental: while the carrying of the sand is to represent the allegory of self-debasement. At funerals we can still recognise the customs dating from heathen ages, as contained in the allegorised ceremonials connected therewith.

is employed as a rug, a cloth or a curtain. The work of making the «tapa», accompanied as it is by the sound of loud hammering, attracts the attention of every new arrival. Apart from this noise, we find the same peaceful life on the Tonga Islands as on all the islands of the South Sea. The inhabitants are peaceful, behave properly, do not shout, are courteous to strangers, but, like their kinsmen the



Tomb in the Tonga Islands.

Maoris, do not consider white men in any respect superior to themselves. The Tongas are fond of horses: we often see natives cantering along, — the bare footed horseman holding the stirrup between his thumb and middle finger, or merely riding barebacked.

On the western side of the island, 13 miles from Nukoalofa, we find the langis built with a double staircase and flanked with enormous slabs of coral. It was in

these that the Tongans of old buried their kings who were of divine extraction. At a distance of three miles from the langis stands the Haamunga Stone. This Stone is a triumphal arch or gateway 25 feet high, built of slabs of coral cut in the form of columns: antiquarians are not decided as to what culture has left this huge stone monument.

In the western half of the island there is a stalactite cave too: the stalactite formations are fair-sized ones, but



Group of Tongan women sitting on a «tapas» carpet made at home.

the smoke made by the large quantity of palm branches burned in the cave has blackened the white walls, while visitors have played havoc with the stalactites themselves, which constitute the chief beauty of the cave.

In the northern half of the island of Tongatabu, 11 miles from Nukualofa, a group of some 20—25 trees is by day to be seen swarming with large flying dog bats (*pteropus ruficollis*). The fox-headed bats hang down from

the dry branches of the said trees by their hind legs, covering the greater part of their bodies with their large, dark, membranous wings. From time to time one or other of them gets tired of this process, soars aloft, and after hovering in a circle in the air like an owl, again settles among his mates: should he by chance get too close to any of his fellows, the injured creature attacks the trespasser with



The Haamunga Stone on the island of Tongatabu.

a series of squealing and squeaking sounds. In the Tonga Islands, the large bats are «tapu»*, i. e. sacred and inviolable.

* The signification of «tapu», is the same on all islands inhabited by Polynesians, — it means a prohibition the nonobservance of which, before the days of European Government, involved capital punishment. In the Samoan and Hawaiian Islands and in those of New Zealand, it is called «tabu», in the Cook Islands «kapu», but the meaning is everywhere the same. This fact too is a proof in favour of the kinship of all the Polynesians scattered over fardistant islands.

The short-tailed swallows seen in the Fiji Islands are here too to be found in large quantities: from the thickets the song of the «kikau» bird may frequently be heard; the cooing of wild doves is heard occasionally; while the beautiful blue-backed kingfisher (*todirhampus Pealei*) often surprises the traveller with his cries. Curiously enough, Englishmen have not imported miner birds into the Tonga Islands.

On the Tofua volcano and the Honga Tonga bird-island.

(Tour of 18² s. m. by sailing boat.)

The submarine volcano.

While still at Suva, I had read in the papers that, in the vicinity of the island of Tongatabu, a submarine volcano had broken into activity in the month of June 1907. According to the description there given, the eruption takes place 20—25 sea miles from the S. W. shore of the island. The bursts of activity, which at first were repeated every few minutes, were visible from the S. W. shore. When I read the news, I determined to take the first boat for the Tonga Islands, in order not to miss the period of activity of the submarine volcano.

To enquiries made on my arrival at Nukualofa, the Capital of the Tonga Islands, the answer I got was that the submarine crater had finally become extinct during the past few weeks: in fact I was able myself to verify the disappointing news from the southern shore of the island, and so, for the time being, renounced my intention of approaching the place by sailing boat.

I was so preoccupied with the idea of making volcanic observations in the Tonga Islands that I should have been quite unable to content myself with the ordinary tourist round of visits. If not in a position to have a close

view of the submarine eruptions, I thought, I will return to the volcano of Tofua which I had seen on the way to Tongatabu.

By the kind permission of the Prime Minister of George II. King of Tonga, I hired the sailing boat called «Kolofoou» belonging to the Tongan Government and put out to sea in the morning of August 14.

On the well-built bark of 6—5 tons burthen, besides



The «Kolofoou».

myself, there were five natives, — the captain, three sailors and the pilot of the harbour of Nukualofa. To judge by their names, my companions must have sprung from the blood of seamen: e. g. the name of the pilot, Aholelei, means «good weather», those of the three sailors, Mogofisi, Tonu, and Manutahi, «fish», «large fish» and «sea bird» respectively, only Moli, the old master, took his name from the vegetable world.

Till evening we sailed with a gentle quarter wind and set sails: the sailors whiled away the time singing excellent choruses and telling tales of sharkhunting.*

When evening set in, clouds lowered all round us: looking from the side of the little boat, so low down in the water, upon the waves that every moment grew angrier, I felt that it would not be advisable, on a small sailing boat of this kind, to venture on a voyage lasting several days, between the months of December and April (the season of cyclones too).

Before supper, my sailors, led by the pilot, said an evening prayer: after supper they sang a few Tongan and Samoan airs. Then I went to bed in the two-berthed cabin near the stern of the boat. The little craft gliding over the crests of the waves rocked me to sleep: but I soon woke up to the sound of Moli's voice, which entered through the opening above the cabin. He was issuing orders to the slumbering crew. As the same thing was repeated several times, I tried to close the hatch: but such a course was impossible, the compass, without which even an old Tongan seadog would not sail anywhere, being placed at the head of my bed.

After midnight, silence set in. We had stopped on the open sea; for in the dark cloudy night we could not make

* In the Tonga Islands, sharks are caught with nooses. They are said during the pairing season to swim near the surface, when fishermen hold a piece of meat tied to a stick over the side of a boat in places haunted by sharks. The monsters hovering round the boat pounce on the meat and get caught in the nooses set just in front of the bait. So far as I gather from information obtained from various quarters, the description is correct: but native imagination goes farther, and declares that the sharks are enticed by the airs chanted by the boatmen. I was treated to specimens of these airs, which are nothing more or less than the monotonous repetition of calls accompanied by enticing words. Tonu, the «great fish», was convinced of the magic enchantment of his call; but as he said, he had no time at present for fishing of that kind, — I should come in December or January, when I should see what wonders his singing could effect!

out the island we were looking for. The boat thus deprived of its sails began to rock unmercifully.

About 4. a. m., towards the East a comet appeared in the sky: the light of the star might be compared to a broken shimmer, as light regarded through an opalescent glass; its broad tail, of the appearance of watery milk, must have been about 12—15 times as large as the star.



The active crater of the island of Tofua (Tonga Islands).

At daybreak, we continued on our way with a favourable wind behind us.

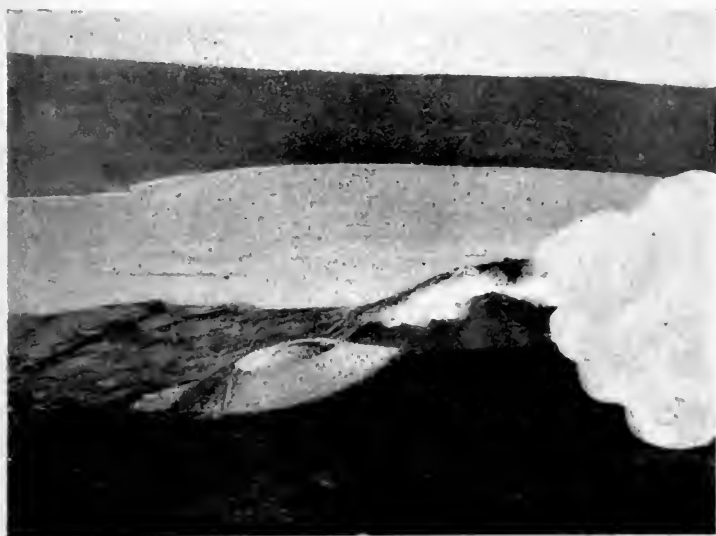
From out a cloud of smoke we could discern the island of Tofua, and, beyond it, to the North, the island of Koa.

At 10. a. m., we were off the western shore of Tofua.

The southern half of the island of Tofua, 1800 feet high, is covered with a primeval forest: from the dense underwood, cocoa-nut trees stand forth prominent. In the

northern half of the island the underwood becomes scantier: and it is here that for the first time we catch a glimpse of the northwestern edge of the barren crater covered with cinders and broken stones of the thickly smoking volcano. The shore round the island is a wall 50—100 feet high consisting of lava and other volcanic products.

About midday on August 15, we came to anchor at



Another view of the same.

the northern end of Tofua, 90 sea miles N. W. from Nukualofa, in a channel between Tofua and Koa. We landed in a boat and set off to climb the volcano.

On the northern shore of the uninhabited island stands a native cottage, which was used by the labourers engaged in quarrying the stones required for building the molo (pier) of Nukualofa: today it is deserted. From this cottage a narrow path leads to the thicket. I thought we

should find a trodden path: but after a few hundred paces we lost all trace of the track, and from this point we were obliged to pioneer a road for ourselves to the volcano in the centre of the island. For some distance we traversed a ravine, the bottom of which is composed of lava and then leads over fertile crumbling soil impregnated with bluish black volcanic cinders. The sides of the ravine have been thickly overgrown with trees and shrubs: the



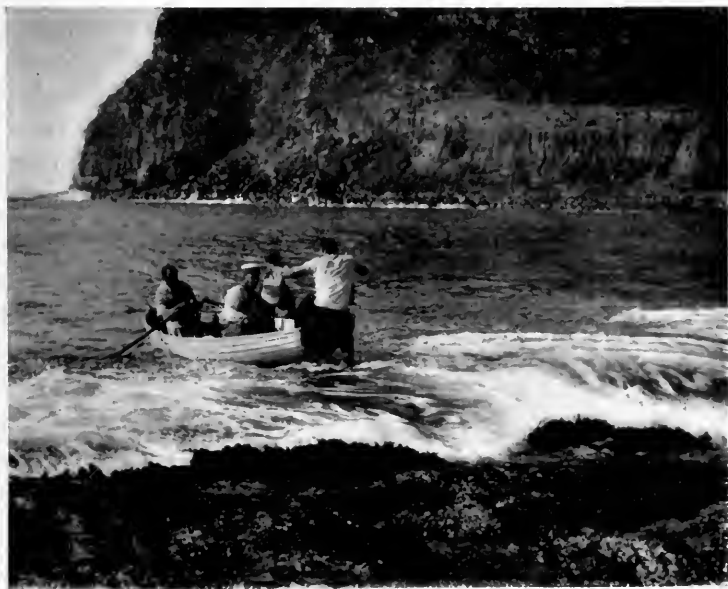
The island of Koa, situate opposite the island of Tofua.

trees are joined by a woof of bryony an inch thick. In the country beyond the ravine, ferns and other shrubs constitute an almost impassable thicket. At the foot of the ferns and more particularly of a shrub producing subterranean fruit, at every step we find traces of wild swine. Could a sportsman cut a path for himself or take his stand on the side of the ravine, with good hounds to help him, he could have splendid sport hunting the swine which

have long ago become wild and may today be considered as game.*

After a very fatiguing struggle of two hours, we at last found ourselves close to our goal: and, after devouring the lunch we had brought with us, started with renewed vigour on the last quarter of an hour's climb.

At the top of the hill I saw stretching before me a



Landing on the island of Honga Tonga.

prospect similar to that I had seen on the elevation beside the Waimangu geyser in New Zealand. The northern, outer side of the crater is covered by sharply broken stones. Among the fragments, in three places indentations crusted

* The swine and horned cattle brought by the first explorers or settlers have, on several of the South Sea Islands, become wild and propagated. The mammals are represented by these, together with the bats, rats and mice.

with bluish black cinders brought there by water, — probably subsidiary craters.

The southern half of the old crater $2\frac{1}{2}$ —3 miles in circumference, is covered with woods: the bottom is filled by a blue-watered lake. On the northern bank of the lake, from E. to W., three craters of more recent date of the appearance of enormous ant-hills are ranged side by side, as in the crater of Mt. Haleakala on the island of Maui (Hawaiian group). The western «ant-hill» crater seems to be absolutely extinct: the other two pour out in quick succession dense columns of thick white sulphur fumes. The northern side of the bottom of the old larger crater, from the triple inner crater or rather from the bank of the lake to the wall of the large crater, has been covered by cinders and broken stones: while towards the east, a field of cooled lava stretches beside the shore of the lake.

The volcano of Tofua was in activity between May and July in the present year: the present dense fumes are therefore merely the after-play of the activity then brought to a conclusion.

On the way back, a beautiful prospect was offered by the island of Koa, 3380 feet high, rising abruptly out of the sea. The extinct crater of Koa is also filled by a lake.

After supper we set the sails again and by moonlight sailed out from the channel separating the two islands. On August 14, about 4. a. m., in my desire to get a view of the comet, I looked all round, — we were still tacking near the two islands! The breeze was very slight, and besides, we had to struggle against the tide sweeping round the islands. After sunrise we turned S. W., with a gentle breeze behind us, towards the two Honga islands.

About 10 p. m. on the 16th we arrived at the island of Honga Tonga, 54 sea miles from Tofua. As we approached, thousands of sea birds made their presence heard on the island side: the chattering and screaming of the birds mingled with the rumble of the waves dashing on

the steep island shore. We approached the island as close as circumstances allowed; but as, owing to the deep water, we could not anchor,* we were obliged to commit the bark again to the mercy of the ocean.

The sailless «Kolofoou» began to rock even more violently than during the night of the 14th: Tonu, the «great fish», was made ill by the awful pitching and rolling: otherwise we were all in the highest spirits when the sun rose on the 17th, and with the aid of the favourable breeze that had sprung up, we were able to cast anchor between the two islands of Honga.

These two islands (Honga Haapai and Honga Tonga) are both of volcanic origin. The shores of both have been built of steep lava strata and other volcanic products.

On the shore of Honga Tonga, in the channel between the two islands, the waves breaking inwards have formed enormous pebbles of the lava stone. Here it was that we sought out a spot for landing.*

One of our sailors came from a district where the shore was equally steep and wave-swept: so he was quite at home in the management of a boat in similar circumstances. He rowed close in shore, then waited for a suitable low wave, and bore in on its crest to a spot of sufficient height. One of the boatmen leaped out. The experiment was repeated until all three of us were landed: but even so we got wet up to the knees.

When we landed, hundreds of small black and white gulls, which had been squatting on the sands, took wing. We had come while they were sitting on their eggs, which lay scattered all over the sands. Climbing up the steep

* These elongated, stalactite-like stones washed into the shape of troughs, — to be found also on the lava promontories projecting into the sea -- can be used by the natives, without any need of polishing, for grinding or pounding purposes. In fact the trough-shaped slabs of stone used in pounding kava roots are still procured in this way in the islands.

shore, we frightened a still larger flock of birds away from the soft, grass-grown guano: the wheeling creatures protested with shrill shrieks against the disturbance, but as they saw we had no intention of doing them any harm, they settled down again on their eggs quite close to us.

As we came down, we inspected the edge of the shore. The precipitously descending lava wall at one end



Two sisters from the Tonga Islands, one with a pandanus girdle round her waist, the other in town garb.

of the island is brought to a conclusion by a low promontory. In the trough-like or elongated indentations of the terrace-shaped promontory, even at low tide water is to be found: and these indentations are full of bristly marine creatures and mussels, and it is here that the coral families begin to build their genealogical trees which will probably last for a very long time.

By 10 a. m. we were again on the way home. How-

ever, owing to a head wind of medium force, we were not able to reach the outer reef before Nukoalofa until about 9. p. m. The question to decide was, whether we should again spend a night rocking out on the open sea, or venture to overcome the difficulties of the water inside the reef. We resolved to try the latter course. Notwithstanding the light of the moon, we could only guess the whereabouts of the islands near the reef: but for the pilot who was familiar with the surroundings even this was enough to enable him to steer a course. We tacked up and down along the natural breakwater until we came across the deepwater channel: but now came the more difficult task, — to keep to the deep water among the dark spots marking coral banks. The task was rendered doubly difficult by the fact that, owing to the head wind, the boat was continually changing her course. After grazing a coral rock, when the moon had set, Moli gave up making any further attempt. We cast anchor: and on the morning of the 18th we found ourselves about 3 sea miles distant from Nukoalofa.

All along the shore columns of smoke were rising heavenwards: it was Sunday, and the inhabitants, according to local custom, were cooking food for the whole day at dawn, as that day was devoted entirely to rest and church-going.

On Aug. 21., in the afternoon, news was brought to the hotel of a fresh eruption of the submarine volcano: in order to convince myself of the truth of the report, I drove to the look out on the S. W. side of the island.

During an observation lasting one hour I saw 13 eruptions, in a S. E. direction. Both the intervals between the eruptions and the extent of the latter varied considerably. Twelve eruptions followed at intervals of 3 — 8 — $3\frac{1}{2}$ — $5\frac{1}{2}$ — $\frac{1}{2}$ — $2\frac{1}{2}$ — 4 — 10 — 9 — 2 — 3 and 11 minutes respectively. The smoke rose in single, double, five and indeed in one instance in seven columns. Considering the

great distance, it was impossible to make out the starting point of the columns of fumes shot out like the the water-spouts of geysers: consequently it is quite possible that the smoke shot out of one crater did not distribute until later, though this supposition seems to be contradicted by the pipe-like distribution of the columns (i. e. they were ranged at a considerable distance from one another). The next morning I started on the «Kolofoou», but as, after cruising about on the open sea with a favourable breeze for several hours, I could not see any sign of the volcano, I returned. I spent a few more days on the island of Tongatabu, during which time the activity of the crater ceased. On Aug. 26, 1907, the day of my departure, it was rumoured that the volcano was active again. And in fact I did see two eruptions from the S. S. «Manapouri», which started towards evening: on both occasions a dense, dark column of smoke rose heavenwards. The second eruption followed the first at an interval of about 10 minutes.

While the eruptions last, the waves wash large quantities of dark ashen grey pumice stones consisting of small fragments on to the shore. But apparently the activity of the volcano had no effect on the action of the waves.*

* In order to get the latest accounts of the Tongan submarine volcano, I left Apia on Dec. 24, 1907, by the S. S. «Atua» bound for Auckland via the Tonga Islands. According to information gathered at Nukualofa, the volcano had been active towards the end of August and November for a few days. On the occasion of the latest eruptions, — not as at the commencement of operations, white and occasionally dark-coloured steam and smoke, but at each eruption observed, dark yellow or black smoke columns were emitted, while at nightfall the volcano shot out fire. This is all partly to be explained by the fact that, together with the fumes and smoke, on this occasion the crater threw up lava as well, and partly suggests that the crater is nearer to the level of the water, i. e. that a new island has been partly built of the products of eruption.

Captain M . . ., a marine officer residing at Nukualofu gave me the following additional data referring to the submarine volcano: On Aug. 6, 1907, the schooner «Isabel» commanded by Captain R . . ., left

the island of Tongatabu for Auckland (New Zealand). About 5. p. m. the boat, which was sailing very rapidly at the time, received such a shock that the crew, believing she had sprung a leak, rushed to the pump. The shocks were repeated, the last occurring at 6. p. m. At the same time the schooner's environs were permeated with a strong smell of sulphur. The coloured of the disturbed stretch of water in contrast to the dark blue hue of the ocean, was of a dirty green (consequently resembling that of the water round the outlet of lava on the island of Sawaii). The shock was probably caused by «seaquake»? The spot in question lies in latitude $21^{\circ} 18'$ S. and longitude $175^{\circ} 47'$ W. The spot effected by the eruption must be about 15-20 sea miles from the N. W. end of the island of Tongatabu.» The events related to me by Captain M. . . ., were described in the issue of the «Auckland Star» of Aug. 31. 1907.

CHAPTER X.

THE SAMOAN GROUP OF ISLANDS.

The islands under German suzerainty.

The Samoan islands stretch from the E. S. E. to the W. N. W., between latitudes $13^{\circ} 30'$ and 14° S., and longitudes 168° and $172^{\circ} 48'$ W. The political influence of Great Britain, Germany and America on these islands began in 1870. By a treaty dated Dec. 2. 1899, Great Britain renounced all claims on the islands; Germany undertook the protectorate of Sawaii (1691 sq. kilometres), Upolu (869 sq. km.), Manono (8.5 sq. km.) and Apolima (4.7 sq. km.); while America occupied the islands of Tutuila, Manua (Tau, Ofu and Olosega) and Rose, of an aggregate area of about 216 sq. kilometres, under the title of the «United States Naval Station Tutuila.»

The Samoan islands are of volcanic origin. On the island of Sawaii (German Protectorate) the highest mountain is 1800, that on the island of Upolu 1100 metres. The ranges of mountains stretch from E. to W. with fairly precipitous ridges. In the valleys ravines have been formed. On Sawaii brooks are not of so frequent occurrence as on Upolu, for the stony soil sucks up the rainfall, so that in most cases the brooks flow underground and appear on the shores only, in the shape of springs.

The climate is a tropical one. From May to September the trade winds freshen the air; and during the same period

Steamship Company», still gravitates towards Australia, New Zealand and Great Britain.*

The natives have all turned Christians. Their occupations are, the cultivation of the soil, and fishing. The foreign settlers are engaged in growing cocoa-nut trees, cocoa, vanilla, coffee and caoutchouc. The enterprise of the European settlers has to combat with the enormous difficulties caused by the want of labour. Despite the high wages, natives do not undertake work for any long period of time: — willy-nilly, he ought to be compelled to do so, is the idea of many a settler imbued with the lust for gold. Recently, to supply the deficiency in labour, Chinese coolies have been brought to the island of Upolu, by the consent

* The present Governor of this group of Samoan islands, Dr. S. . . , manages the affairs of his charge with the prudence of a true diplomat. He respects the rights of the British settlers and traders acquired under the older regime just as much as those of the more recent German immigrants. Among the German traders there are plenty of chauvinistic, short-sighted and selfish elements, who refuse to allow anyone not German by tongue to have any say in public affairs, and without any preliminaries start to Germanise everything and everybody just as eagerly as they make every possible use of the labour of natives. They have no regard at all for the native customs, which have developed on a basis quite at variance with European conceptions: they cannot understand that islanders, whose every want is supplied by the products of the primitive soil, and who have not yet the refined feelings and tastes of Europeans, cannot feel the want of work. The Samoans cultivate the «taro» (or, as they call it, the «talo») and the yams on their small plots, catch as many fish as they require for their meals, collect the fallen cocoa-nuts, pluck the ripe bananas, bread fruit and pine-apples, and rest through the remainder of the fatiguing close season with its moist warmth, — and of an evening close the day with dances, songs, and feasts.

It will be a bad day for Samoa when a Governor identifying himself with the conceptions of the above-mentioned «innovators» gets the reins of power in his hands. Such an event would involve the destruction of the primitive originality of these islands, which is so agreeable in its naive simplicity, and which the previous British system allowed to pursue its own original course of development in peace.

of the Governor, with a contractual obligation of service for a period of three years.

Children between the ages of 7 and 16 are obliged to attend school.

The retail of liquors to natives is forbidden in the Samoan Islands too: on the islands of Sawaii, Manono and Apolima, owing to the lack of inns, this decree can be carried out without any difficulty, and it is partly to this circumstance that we must attribute the fact that the inhabitants of the said islands have preserved their primitive customs better than those of Upolu. Here, as everywhere in the South Sea Islands, the Capital has imprinted its stamp on the whole population: the natives lounging in the halls of the inns have no difficulty in obtaining a glass of liquor: the exorbitant price of the latter is beyond their means, however, and they find themselves face to face with something hitherto unknown to Samoans, — the feeling of want.*

Apia.

(560 sea miles from Nukualofa.)

Apia, the Capital of the Samoan islands under German suzerainty, lies on the northern shore of the island of Upolu. On our arrival, in the bay protected by a coral reef, we are confronted by the wreck of a German warship lying sideways on a shoal. In 1889 three American and a German warship, the «Adler», anchored in the harbour, were thrown on to the shoal by a tidal wave caused by an earthquake or volcanic forces, or by a com-

* The prohibition of the sale of liquor by districts, as practised in New Zealand and in the Cook Islands, which are tributary to the same, is much more adequate than the system in vogue in the Samoan Islands, i. e. the prohibition of the retail of liquor to natives only, a prohibition the carrying out of which is rendered impracticable owing to the presence here and there of white men who cannot exist without their spirituous drinks.

bination of both factors, sweeping half the crews off the decks. Wrecks of ships lying on shoals is quite a common sight near the South Sea Islands: but it is worth while telling the story of the four ships of war, as it will help us in our study of the race inhabiting the Samoan islands.

The ships had come to put down a rebellion of the islanders and yet these men, who know scarcely anything of European civilisation, did not leave the foes brought there by the waves to their fate, but, at the risk of their own lives, hastened to their assistance.

The mountain forming the background of Apia can also tell us a story illustrating the temper and spirit of the Samoan (Polynesian) race. Stevenson, the famous writer imbued with sympathy for the Samoan natives, chose Apia for his home: when he died in 1884, at the command of all the native chiefs (Alii), five hundred workmen cut a path over the hill behind the town, through a primeval forest, to a height of 1000 feet; and the coffin containing the body of the «loving heart» — as Stevenson was called by the natives — was carried up by native chiefs to the burial place.

Apia does not possess a landing-stage (pier): ships come to anchor in the bay. On our arrival, natives came to meet us in long boats. The craft which hurried towards us from all directions were manned by natives of herculean build, who sang as they rowed. We could hear the high throat voices of the leaders of the excellent choruses, — a fact that rendered the appearance of the brown-skinned boatmen still more original. The anchor touched the bottom: the boats were ranged along the inner side of the ship, peacefully waiting for the passengers to descend but the song still continued; boats came from remoter spots, belated, to the sound of singing, and, as we took our seats in the boats, the oarsmen struck up again. It was like arriving in Venice, with gondolas resounding with the music of guitars . . . ! Such is the feeling with which

one is overcome on arriving in Samoa. Only the Venice canals are not suited for sunlight, whereas in the bay of Apia even by day we are inspired with the spirit of moonlit surroundings.

With the thickly overgrown hills composing the background, Apia, which appears amid palms on the shores of the crescent-shaped bay, offers a charming



Samoa maiden, with a ribbon-like «ula» on her neck: in the background typical Samoan houses (Upolu: Samoan Islands).

prospect. In comparison with the neatly kept houses of Suva and Levuka, the dwellings of the Europeans have the appearance of neglect: but, after a short distance on the way towards the interior of the island, we find ourselves among the friendly native inhabitants. The sides of the oval or more rarely oblong native houses are open but for the beams supporting the shell-like roof: besides the beams forming the frame-work, one or two cross

girders and rafters too are used in building. The only material used to fasten the beams together and to connect the rafters and the roof, is a kind of cording made of the fibres of cocoa-nuts. The Samoans are great experts in the use of this cording. The floors of the houses are made of sea-worn lava pebbles, covered with rugs of pandanus leaves plaited like matting. The spaces between the beams, during rainy weather and on cold nights, are covered over with curtains of plaited cocoa-nut leaves: otherwise Samoan houses are open all round. They are open because the Samoans have nothing to hide, because guests are ever welcome, and because this is the style of building best suited to the warm, moist climate.

After supper I sauntered in the vicinity of the native houses. Everywhere the family was assembled, sitting by lamp-light: in most cases they did not even suspect my presence. Not even at court levées is the conversation conducted more quietly than in these open houses: only the small fry occasionally disturb the silence — but in Polynesian homes children may do anything they like.

The Samoan islanders.

In point of the colour of their skin, the Samoan natives are in general somewhat lighter than the average Polynesian: the expression of their faces reminds one to some extent of the Caucasian race: in point of dress they approach most nearly to the Tongans (I mean of course the Tongan costumes worn in the warm season). In their sixteenth year Samoan youths tattoo their bodies from the knee to the waist: the painful operation often lasts for days and is of a solemn character, for when it is over the tattooed youth is regarded as an adult. A man thus tattooed from a distance looks as if he were wearing drawers with designs of a dark hue, — the description actually given by one of the first explorers of the natives who

at that time did not wear any other dress. It seems the worthy man was content to explore — from a respectful distance!

The women too often tattoo their legs above the knees, though not like the men with a close design, but in the form of crosses or dotted lines: the same kind of design is used to decorate the metacarpus, which from a distance gives one the impression that its owner is wearing open-work lace mittens.*



Native «beauty» (Samoan Islands).

The men in general and some of the women dress their hair in the fashion in vogue in the Fiji Islands, though they crop it closer. The members of both sexes put white or red flowers behind their ears or into their hair, by way of ornament. Round their necks they wear the «ula», a necklace made by stringing together the elon-

* Tattooing of the hands is fashionable among the women of Hawaii too.

gated red berries of the *Eugenia* sp. bush or the pink elongated clusters of the fruit of the pandanus tree and the petals of flowers. The bare-footed Samoan women, in the neighbourhood of Apia and in the districts inhabited by white men and crowded with missionaries,* are gradually adopting undress costumes (a kind of dressing gown) reaching to the ankles, but have in other respects stuck to the ancestral garb, which is far more convenient and better adapted to the climatic conditions. Samoan «divas» thus dressed bind the *lava lava* (coloured print) round their waists, — on festive occasions the *siapo* of beaten liber, or the finely plaited *ie sina*, while the upper part of their bodies is covered with a cloth or by a chemise with short sleeves. It would indeed be a crime not to leave uncovered Samoan backs and arms! In the family circle and in places at a distance from the haunts of civilisation, the *lava lava* does duty alone: but the moment a white man approaches, — particularly if he be of a malicious appearance — the upper garments are hurriedly donned.

The ornaments of the native blackeyed «fair» sex, who seem to have been born with a smile on their faces, are their full necks, and backs, their rounded arms, wealth of hair, and white teeth. The only part of their legs to

* Undoubtedly the missionaries have spared no pains and have often succeeded in doing useful work in the South Sea Islands: but a fault in their plan of action is that they ride forms to death as did the fanatical zealots of the Middle Ages, — e. g. the missionaries of the English Church have decreed that native women must not go to church without hats! From an aesthetic point of view, this decree is absolutely incensing. The bare-footed, shapely, ever smiling divas of Samoa, in their Sunday-go-to-meeting long gowns and straw hats rolling about on their cropped heads, are degraded to common and ridiculous nursery-maids. The long dresses which are not at all suitable for the warm climate are also the results of the missionaries' influence. Apart from the aesthetic point of view, this kind of dress is damaging to the health, for girls arriving home on a hot day in their long gowns, throw them off from their perspiring bodies and catch cold, — and in Samoa, the home of song and dance, to catch cold is very often fatal.

which exception can be taken is the ankle. And when we consider the whole woman is covered with a healthy glossy skin of the brown hue of coffee, we have here a charming creature such as even the primitive world of the enchanting South Seas has not been able to bring into being elsewhere . . . This short description would be incomplete were I to omit to mention the fact that the members of both sexes are very particular about the cleanliness of their bodies — a point in which they can vie with the upper ten thousand in Europe with all their refinements in the field of baths. The chivalrous Samoan men allow their women folk to do the easiest domestic work only, — treat them with indulgence, that they may preserve their bodily health: and by winning the heart and favour of the women they love, they do not consider the rights thus acquired as final. An injured, sleepy or fatigued *diva* demands fresh conquests.

When a healthy girl ready for dancing or singing pays a visit to a white man (papalagi) with one or more companions (for it is against the rules of decency to go alone), she seizes the first opportunity of sitting down at the writing table, and scribbles a love-letter on the first piece of paper she can lay her hands on, — though you would be mistaken if you took the gracious words very seriously. It is only playfulness, at which they are great hands. It is a difficult task to pierce the barriers that hide their little hearts (but of this more anon).

Excursion from Apia.

Mata'afa, the dethroned King. The ceremoniousness of Samoan society.

In the morning of Aug. 29., at the desire of the passengers who had come from Auckland and the Tonga Islands, we made an excursion to the Papasea waterfall. This waterfall is a very unpretentious affair. But, in sur-

roundings such as those in which I saw it on Aug. 29., a sight which can be had probably in Samoa only! The excursionists drove in carriages: in most of the latter there were two passengers, — a stranger and a native girl. By the intervention of the inhabitants of Apia who had come with us, we were enabled to take a picked selection of the beauties of the Capital with us.



«One of the girls sat right on the brink of the fall and [making up her mind suddenly, began to slide down the slippery precipice» (Papasea waterfall, Island of Upolu).

After a drive of 8—10 kilometres, past cocoa-nut, banana, and cocoa plantations, then through rows of primeval trees overgrown with climbing bryony, we left the one-horsed gigs behind us, and did the remaining half hour to the waterfall on foot. The road during the last quarter of an hour passes down a precipitous incline to the head of the fall. The tiny mountain stream which comes from a distance descends into the depths from a smooth terrace of lava.

When we had arrived at our destination, our guests, in order to put on the coloured chemises they had brought with them for bathing purposes retired: under the chemises they kept on the *lava lava* tied round their waists. They changed in no time: and then they settled down in a row on the projecting edge of the waterfall. It would be difficult to imagine a more picturesque sight than this group of shapely girls in their light chemises!



Nymphs basking in the sun.

One of the girls sat right on the brink of the fall and, making up her mind suddenly, began to slide down the slippery precipice. The rapid current of air undid the coal-black hair waving over her brown face; and the beautiful daughter of the islands raced the rushing stream into the basin of deep water that lay below. In a short time a Nymph smiling in the sunbeams rose to the surface of the crystal-clear water. The first nymph was

followed by the second, the third, and the others: for a time they swam about, gambolled and frolicked, then, with the linen sheets lying close on their shapely bodies, they mounted to the brink of the fall, and repeated the sliding process; the native boys who had come with us and the tourists also stripped and followed suit: the former while in the air performed the cleverest acrobatic feats.*

On arriving home, we had just time to change when the carriages drove up again. We paid a visit to the chief F . . ., in his home two kilometres distant from Apia. After the usual draught of «kava», which is drunk with more ceremony in the Samoan than in the Fiji or Tongan Islands, we went to the house of the chief's son. Here we were welcomed with a dance. The dancers were men: and in the centre of the group the chief's son, a man of herculean build, and his wife, the charming Faamu, were placed. The Samoan dance consists for the most part of «attitudes»: the dancers sitting in a row go through a series of movements of the arms, waist, and head, while the leader trips the dance standing; besides, one or two dancers who stand up perform the parts of court fools. The native princess danced so gracefully, so artistically, that in the hands of a good master she could be trained to be a first-class *ballerina*.**

In the village of Mulinuu adjoining Apia, dwells the grey-headed chief Mata'afa, who during the first period of

* The carriage-road leading to the Papasea waterfall is continued by a foot-path which leads through a primeval forest to the crater lake of Lanutoo (18 km. from Apia). There are numerous singing birds living in this forest. The crater overgrown with palms and bush, with its crystal-clear lake, is also a favourite resort for excursionists from Apia.

** The dance of the Samoans is perhaps the best developed of all in vogue in the South Sea Islands. Most of the songs too originate from Samoa. In point of technique of singing they are surpassed by the Tongans, who have given up singing through their noses and can read music in the tonic notation, though they too borrow most of their airs from Samoa.

German suzerainty was the recognised ruler of a part of the Samoan Islands. We were received by the great chieftain sitting cross-legged on a pandanus carpet, with a golden cross hanging round his neck on a gold chain.

The old gentleman is every inch a chief: not even an English lord could surpass him in courtesy and dignity.



The great chieft Mata'afa before his house, on the island of U'polu, near the Capital.

Besides his own property, the great chieft enjoys a grant from the German Government: in feeling he is a devout Catholic. With the natives his authority is still paramount. E. g. my coachman, notwithstanding the fact that he was himself a chief and a near relative of Mata'afa's, the moment we approached the house of the old king, got off the box and led his horse. He did just the same when we were leaving. According to the unwritten

law of Samoa, this is part of the respect due to a great chief.

The social order of the Samoans is bound by a whole series of ceremonious customs. When speaking to a chief, the ordinary mortal is very choice in his words, using only the so-called «chieftain» ones (words invented for the exclusive use of chiefs). The recognition of superiority finds its expression in the manner of greeting and other strictly prescribed formalities. Ever since the white men have obtained the suzerainty, owing to the intercourse with Europeans, many changes have taken place in native customs: but in their dealings with each other, the natives are guided almost exclusively by their ancient traditions.

The general characteristics of the Polynesian race, patience and quiet behaviour, are to be found among the inhabitants of the Samoan Islands too: besides, the Samoans are so courteous in their behaviour that they may be classed, in this respect, as perfect gentlemen.

On the island of Sawaii. The flow of lava into the sea.

The harbours of Sawaii and Apia are connected by a service of small merchant sailing boats running at uncertain intervals. I started from Apia on Aug. 31. 1907, by a sailing boat of this description of 20 tons' burthen, on a visit to the island of Sawaii. Besides me there were 2 other passengers, Mr. W . . ., a high official of English extraction entrusted with the government of Sawaii, and a native missionary.

Before dawn, 43 sea miles in a straight line from Apia we arrived opposite the stream of lava pouring into the sea. We approached within about a third of a mile — the little craft that was at the mercy of the wind dare not go nearer.

Lava proceeding from a crater 11 kilometres inland (in a straight line) disappears under an older lava-bed, and suddenly breaks forth again on the sea shore. The meeting of the boiling lava with the water of the ocean causes an impenetrable column of steam white as snow to rise. At the foot of the cloud of steam which assumed the shape of coral skeletons, angry red tongues of flame ran hither



Lava pouring into the sea (Island of Sawaii, Sept. 1. 1907).

and thither as if some harbour town had fallen a victim to the fiery element.

At times the cooled lava flew upwards to the accompaniment of a detonation as of an explosion, and appeared in the form of black spots in the snow-white cloud of steam. At daybreak, the flames became of a lighter hue, then assumed a pinkish colour and finally were to be seen only here and there flashing in the enveloping mass of steam.

We had still $3\frac{1}{2}$ miles to sail to the bay of Matauto, the harbour of the township of Fagamalo (pronounced Fangamalo). The bay of Matauto, which towards the N.W. is exposed to the violence of the waves, is protected by a coral reef along its northern shore: and the coral break-water extends as far as the village of Saleaula which adjoins the lava of 1905. Beyond the latter village the



On our arrival in Fagamalo, we were treated to «kava» (Sawaiian islands).

lava which poured forth in 1905 has completely covered the sea shore right up to the immediate vicinity of the coral reef.

On our arrival, the pupils of the local missionary school came to meet us in a twelve-oared boat. The oars were manned by boys and girls alike.

When we landed, we were welcomed by the elite of the village. After the usual greetings, Mr. W . . . had

«kava» served up and offered us the shelter of his hospitable roof. However, in order to get a better idea of the sanctuary of a native home, I hired a native house and took up my quarters there.*

The township of Fagamalo (pronounced Fangamalo) on the eastern coast of the island of Sawaii. The Samoan „ABC“. The taupo girl.

Well here I was in the island of Sawaii, one of the oldest ancestral homes of the Polynesian race, where civilisation has changed ancient customs still less than in the island of Upolu. Through the open sides of the houses scattered along the shores among palm-trees, everybody has an uninterrupted view of the interior of a native home: it is a simple, unpretentious, affectionate home life that smiles out upon us at every step. Of an evening we see the members of a family sitting round the fireside or gathered round the lamp. Today they are on a visit to this relative, tomorrow the house of another relative welcomes them . . . relations are always at home in each other's houses . . . Through the rows of palm-trees gleams the fire of the volcano. We ask a pretty girl to come for a walk: she gladly complies, though in most cases only if accompanied by another girl. We walk along arm in arm:

* During the whole course of my travels, but particularly in the islands, I was received everywhere with the greatest courtesy and kindness. Did I desire to express my thanks to everybody, I should have to devote a whole chapter to that purpose. But I cannot pass over the kindness of Mr. W . . . in silence. That I am able to speak of the conditions of Samoa with the authority of one who has spent years on those islands, though I only sojourned there three months, is due entirely to the goodnatured courtesy of this gentleman, who was ever ready to give advice and explanations and never failed to proffer his assistance.

and it is not in bad taste even to wind one arm round her waist. What would we not give to be able to understand our companion's prattle! For it must not be forgotten that on the island of Sawaii only the native tongue is spoken. The words, which all end in vowels, sound soft and rhythmical as they fall from the lips of the island beauties.*

Jew's harps are also produced; and the natives are adepts in the use of this little instrument. Then they start



An excursion, in the company of Samoan beauties.

singing duets. And we walk on, forgetting ourselves and the past, and enjoying the charming playfulness of our

* The Samoan alphabet consists of 11 letters, — a, e, i, o, u, f, g (= ng), l, m, n, p, s, t (pronounced in many places as k), and v.

Double consonants are impossible: all words end in vowels, — that is why natives cannot pronounce foreign words ending in a consonant properly, e. g. my name was converted into Voinisi, «steamer» into «stema», «spoon» into «spooni» etc.

companions as it were in a dream. But we have not yet thrown ourselves thoroughly into Samoan customs: «this innocent sport may soon develop into the serious complications of a romance», we think, — but here we are gravely mistaken. We Europeans cannot comprehend the ever-smiling coquettish Samoan fair sex, always ready to dance and sing, all at once: they are bold and natural in their behaviour, but think much of the conventionalities of



«Lupesamoa taupo», from the island of Sawaii.

their own society. Their dreamy little world has its own aesthetics just as white men's society has: and the black-eyed island beauties never commit a breach of the rules of decorum prescribed by Samoan society. They will accompany us of an evening in our walks, though generally speaking not without female escort. And the end of the laughing, singing and flirting is that we arrive home as we left, — in the company of our «gooseberries».

The women inhabiting these islands are quite ready to engage in a liaison that, as far as can be seen, will be a lasting one (according to Samoan ideas, marriage): but considering their very free and coquettish behaviour, and that they are only too glad to receive presents from admirers, new arrivals must think them, notwithstanding all their graces, not only cold, but selfish and even calculating. It is true that the ladies of Samoa are not particularly given to lust (in the European sense), but selfishness is also not their prevailing characteristic.

As for their «calculation», we find its explanation in the communistic tendencies of their society. Sweets, food, silk scarves, trinkets presented by admirers are passed on as soon as they arrive, and are distributed among the relatives (*aiga*, pronounced *ainga*), — this system was developed by the traditional customary laws of Samoa, and the same is true of money presents too. The best way of explaining all that has been said is to give a description of the «taupo» girl, who plays an important part in female society.

These girls receive the title of «taupo», either as the scions of a chief's family, or the adopted daughters of some chieftain. Every larger village has one, two, or even three «taupos» of its own. The «taupos» are under the supervision of elderly women: the moment they receive the title, they are in certain respects in the service of the village.

These jealously guarded treasures of the village are chosen as their wives by young marriageable chiefs.

The intended bridegroom comes to the house of the girl's parents with his suite, laden with food and presents. The village council then assembles, to debate whether the presents brought are sufficient or not. If they decide that the gifts are inadequate, they are returned: but the suitor often leaves the boat-loads of edibles behind him, and returns again, often for a second or third time, with ever-increasing supplies of presents.

The more respected the family from which the «taupo» is descended, the more readily does the village of the suitor open its pockets, — for it should be noted that the gifts are «subscribed» by the relatives. Finally, when the gifts offered have reached the desired measure the «speaker» (tulofale)* of the chiefs of the taupo's village, after declaring the public interests satisfied, appeals to the girl's



«Aituivi taupo», from the island of Savaii.

heart until she says «yes». Herewith the work of the «taupo» comes to a conclusion, and her place is generally taken by her sister.

* Every chief has his own «tulofale», i. e. spokesman: the tulofale expresses his opinion quite freely, in the name of the whole village. Consequently the «spokesman» often plays a more important part in the management of the affairs of the village than the chief's (alii) of higher rank.

Till quite recently, before her marriage, the «taupo» had to give public proof of her chastity, in the presence of the assembled kith and kin (all taupos who had forgotten themselves were punished by death). This process, which is entirely at variance with European conceptions, is still kept up here and there, though it has quite lost its significance (of course there is no more punishment by death).

Another custom forming part of the external life of the taupo is that a chief, as a sign of his confidence and respect for a distinguished guest, allows his taupo daughter to share her bed with the guest. At one end of the house the parents and children, in the middle the elderly guardians of the taupo, and at the other end of the house the taupo and her guest — with or without a «guardian angel» — are sleeping off their fatigues.

According to our ideas, it is impossible that the coquettish girl sleeping in our arms should control the sensuality that must arise in her on such occasions: yet in most cases she does so. The early rays of the sun kiss the forehead of the «taupo» beside us; and on the first occasion we creep from beneath the blanket almost with a feeling of shame or even of indignation. After our second or third experience, however, our ideas change, and we feel a kind of gratitude towards the strong-willed girl who seems to sympathise with us, yet never oversteps the limits prescribed for her by society!

The sensuality of the Samoan world is by no means so unconstrained as that of ours: the common home,*

* This conception does not, however, imply the concubinage of relatives. The customary law of Samoa strictly forbids the marriage of blood relations: and it is to this rule, thoroughly approved by public opinion, that we owe the fact that the native inhabitants of the islands are, almost without exception, well built, and that the degenerated offspring of the concubinage of relatives are not to be found in the common homes. Hence it is that a brother can never be found living with a sister, and that in their sister's presence, the men are very particular in the choice of the expressions they use.

common (mixed) bathing, and the deficient clothing have all helped to prevent sensuality developing to such degree as in Europe, with its completeness of costume, its retinery and its neurasthenia. Anyone who has seen a sleeping Samoan, will understand that this iron-nerved race, which it requires the sound of cannon to awaken, cannot be judged by our psychical rules.

It is to the strength of the common aesthetic conceptions thrown into relief by their society with its communistic basis that the moral feeling is due by virtue of which the «taupo» almost always plays the part of a heroine. There may be, in fact there are exceptions: a guest speaking a pretty Samoan may win the confidence and even the heart of a «taupo», but if the admirer is conscientious in his declarations and promises (I mean of course moral promises, for no material offers can open the otherwise untrustful and indifferent heart of the «taupo»), he must pay the girl of his choice unwearied attention for a long time before he succeeds in overcoming her will. And anyone who attempts to win her favour in a coarse manner, has done for himself in the Samoan Islands, — for there is not a «taupo» who would dream through the thousand and one nights of the Southern Seas in his arms.

The district of the Sawaii volcano.

(The crater is about 10 kilometres distant from Fagamalo, as the crow flies.)

On Sept. 3. 1907, at 7. a. m. I left Fagamalo for the crater which had been active since Aug. 4. 1905.

Seven natives accompanied me, one to act as interpreter, the other six to carry the tents, food, and water.

The road to the volcano leads for some distance along the shore, among rows of cocoa-nut trees, then towards the interior, at first through plantations and finally by a path cut through a primeval forest. On the shore old

layers of lava are succeeded by sands. On the plantations, besides cocoa-nut trees, many bread-fruit trees are grown. The primeval forest is inhabited by scores of the kikau kind of thrushes, wild doves and a small species of parrots (*coriphilus fringillaceus*).

About 11. a. m., in the centre of a burned down forest, on the Olonono plantation, we halted for lunch. Leaving my horse in the plantation, in the afternoon I too went on foot for the remainder of the journey. For about three hours we passed through a primeval forest destroyed by the volcanic cinders of the eruption of 1905, up the gradual slope of a hill-side covered with black lava ashes playing in bluish tints. After walking an hour and a half, from a projecting ridge we caught sight of a broad stream of lava that had flowed N. E. from the crater, and of the smoke of the new stream pouring into the sea. During the last half hour, as we traversed the foot path skirting the forest, we were quite close to the volcano.

The crater, which has been estimated to stand 700 metres above the level of the sea, has been built all round by the streams of lava that, during the first eruptions, poured forth from the crater like waterfalls. Only on the southwestern side is the outer craterwall covered with stones, cinders and ashes.

The crater is lowest on the southern side (it must be from 30 to 40 metres high): but altogether it lies so low in comparison to the inner cavity, which is 250 metres long and 150 metres broad, that it wears the shape of a flattened cone.

From the foot of this flattened cone, from S. W. to N. E., a thick ring of lava stretches down to the extirpated forest lying all round. This ring is the narrowest on the southern side: and it was at this spot about 200 metres from the crater, that I pitched my tent on the lava field. While my men were busy putting the tent up, I went some distance round the vicinity of the crater.

another one on the southern side. But here too, as I leaned over the edge of the crater, a stream of hot air struck my face. The moderate S. W. breeze, uniting forces with the speed of the hot air ascending from within, developed into a strong wind. The whirling current of air first of all sucked in pieces of paper thrown into the crater, then caught them up again and carried them off in a northerly direction or glued them to the side walls.



The active crater of the island of Sawaii, from the South (Sept. 3. 1907).

From my place of observation I had a full view of the crater: the steep side walls display a yellowish, scorched hue, due to the deposits of sulphureous fumes. On the southern broken-in side the edge of the crater ends in a kind of archway. From the sides two sharp ridges stretch down to the depths of the crater.

The bottom of the crater is covered with a red, glowing lava lake.

The lava, which is melted to a great degree, appears as a liquid matter, like a surface of boiling water lighted by red Roman candles. In hundreds of places the glowing lake is boiling, bubbling and hissing; the intensest activity seems to be in the centre, longitudinally, — from here in all directions waves of fire are breaking towards the side walls. The action of the waves has, in one spot on the western edge, where the activity is intenser,



View of the interior of the Sawaii crater.

washed out a kind of cave in the side wall of the crater. The waves take a cinder-like material of a darkish hue (probably stones too) with them in their course: but in the sunlight the dark spots disappear on the surface of fire. Before reaching the northern outlet which ends like a wedge, the molten matter all takes one direction, with its swift flow stirring up waves that beat like the rapids of a brook wedged in between rocks and finally the

whole stream disappears in a whirlpool. This is the outlet of the stream of lava that pours into the sea.*

Even by sunlight, the crater displays all its pomp of fire: but the surroundings gain very much by the fall of night. The whitish fumes that rise incessantly light up the whole neighbourhood with the reflected gleam of the glowing lava: and the light effect is enhanced by the lowering clouds. Sitting on the brink of the crater, for some time I watched the mysterious night picture: and later on I was able to enjoy the prospect of the crater district illumined by the fire of the lava, from beside my tent. So strong was the light reflected, even at this distance, from the ever descending clouds, that the smallest print could be read without the slightest effort.

I was not alone in the delight I experienced in watching the play of fire: the feathered tribe is also well represented in the district of the Sawaii crater. Two flying foxes and a bird of prey similar in appearance to a kestrel swooped down to the crater time after time, probably on the search for night insects.

On the way home on September 4, we traversed a part of the N. W. lava stream; here, close to the edge of the forest, beside the liquid lava, stretches a long stream of lumpy lava, which, in spots where the lava cooled rapidly, has formed a shore similar in appearance to the ice floes to be seen on rivers. On that branch of the first stream of lava that flowed into the sea towards the village of Fagamalo, even quite close to the end the lava must have been very liquid in character. Both in point of colour and in view of its extremely molten character, the bluish black

* The waves break towards the S. W. side too, a fact which I was able to observe from the N. E. edge of the crater, on the occasion of my second visit, on Nov. 27, 1907. It appears that lava flows out on this side too, a supposition which is supported by the fact that, on the older lava surface beside the southern wall of the crater, here and there fumes are to be seen breaking forth.

lava may be compared to that of the Kilauea crater on the island of Hawaii.*

From Fagamalo to the village of Saasai by boat.

(23 s. m.)

It is a custom on the Samoan Islands that a guest for the night in a Samoan house should bring eatables on his arrival (generally preserved fruit and sugar), and on his departure should give presents to the girls, or even to the master and mistress of the house.**

* According to authentic records made by Sayaiian islanders, the history of the crater that has been active since Aug. 4, 1905, may be briefly summarised as follows: — From July 27, 1905, earthquake shocks were several times observed on the island of Sawai. During the night of the 3-rd—4-th August, a new crater broke out, at a distance of 11 kilometres S. W. from Fagamalo towards the interior. The lava and stones shot out with a noise like the boom of cannon flew to a height of 20—200 metres, so vertically that most of them fell back into the crater. During the first few days of the eruption, comparatively few cinders fell: the lava poured forth like a rushing river over the crater walls and forced its way in a new bed into the surrounding woods, which for some distance round were destroyed by the falling cinders. Three points of eruption were observed in the crater: the intensest was the northernmost; from the southern opening gases were seen to break out; while the central opening was not active except during the most violent eruptions. On Dec. 7, 1905, in the evening, one of the main streams of lava stopped at a distance of about 20 metres from the northern shore of the island: and on the 29-th, the same stream poured into the sea. The lava that is still flowing has been pouring into the sea since Jan. 31, 1906. At first it was about 250 metres in width when it reached the sea: but since then its width has several times changed. The western streams of lava contained more stones and were more compact than those flowing in other directions.

** The value of the presents is a very varied one. The farther off the place from intercourse with the Capital, the less the price paid for hospitality, — in some cases practically nothing. But the chiefs of villages in constant intercourse with the Capital expect to receive money presents too.

The gifts are generally reciprocated by the people of the house. When I came to say goodbye, even in places where my visits had been quite short, I was surprised by gifts of carpets and other products of domestic industry.

Early in the morning of September 13, the slumbering village of Fagamalo was rudely awakened by the blare of trumpets, — it was the signal to warn my boatmen.

The twentyfour-oared, long boat provided with a huge sunshade was already dancing on the water. The oarsmen had taken their places. One stalwart fellow caught me up in his arms, and, wading up to his knees in the water, took me out to the boat: then the steersman gave a signal, and with short quick strokes, we left the shore to the sound of singing. «Adieu! worthy dwellers in Fagamalo: it was indeed a wrench to tear myself away from your peaceful circle! I feel as if I had left my own home, — perhaps for ever!...»

Scarcely had we left Fagamalo, when we rowed out to the open sea and glided on eastwards parallel to the shore.

The lava that has flowed since 1905 forms a black wall on the sea shore. We rowed along at a distance of about 100 metres from the spot where the still flowing lava pours into the sea. On September 1, the lava had poured out in more profuse abundance: but from so short a distance I was better able to make out the pieces of lava shot out at intervals of 15—30 seconds with a sound like an explosion and below the boat we could distinctly hear the hissing of the boiling lava meeting the cold water of the ocean. For a considerable stretch, the sea near the outlet of lava is of a dirty yellowish green colour: the hottest surface is not directly opposite, but winds like a river with the tidal current. At this point, notwithstanding its depth of 20—25 fathoms, the sea water near the shore is almost at boiling point.

The lava outlet was succeeded by a continuation of the steep lava shore. Up till now, the crater which has

been active since 1905 has contributed to the formation of the shore for a distance of about 8—10 kilometres. The new lava shore is followed by one of earlier date, which is already covered with a layer of fertile soil.

The oarsmen left off one song only to start another. The Samoans are splendid seamen: but they cannot row without singing; the moment they cease singing, they grow faint and sleepy, — the main thing is to keep them at it, and this is the duty of the steersman. The latter keeps them company as they sing, urges them to strike up again, cracks jokes, and now and again with choice words expresses his thanks for the excellent song and fine oarsmanship. It is easy to put life into the soft-hearted, huge brown-skinned children, to encourage them to sing: and so the bark glides rapidly on, to the sound of melody, over the waves of the mighty ocean. A voyage of this kind by boat affords a splendid opportunity of seeing to the bottom of their hearts. The «malaga» (pronounced malanga, = voyage) by boat has become part and parcel of the individuality of the Samoan natives.

About eleven o'clock we were approaching the village of Saasai, 23 sea miles from Fagamalo. The worst approach for boats in the Samoan islands is that before Saasai. And that is saying a great deal; for the majority of the approaches through the coral reefs are so little protected that it is only in the South Sea Islands that they could be accepted as channels of communication. At the approach to Saasai boats often upset: so we had to be prepared for a swim in emergency.

On two sides of the said approach, the shore is surrounded, for a distance of several sea miles, by a coral reef. High waves were breaking over the reef. In one place the long line of waves formed several rows breaking sideways. This was the entrance. After a short consultation my boatmen made for the approach. Inexperienced eyes could not even imagine how we were to get to dry land through

a row of such lofty dancing billows! We were now in the channel. To right and left, before and behind us, breaking waves rolled with the rumble of an express train. From the bows of the boat, the look-out who was watching for shoals signalled to the steersman with hand and feet, right and left: for the thunder of the waves we could not understand what he said. Suddenly the boat stopped. The line of waves before us went on. I looked back. A wave mountains high was rushing towards us. This was what we were waiting for. As it overtook us, the 24 oarsmen set to work might and main: and we flew over the shoal into the still water beyond. The wave poured a few bucketfuls of water into the boat, but it was not enough to impede us: had the wave struck us sideways, we must have upset, as many a boat has already done in this *ava* (entrance).

Once we had passed the Rubicon, the tired oarsmen commenced singing. And we arrived at our destination, the village of Saasai, to the sound of a joyous melody.

«There is the chief's house», said my native interpreter, pointing to a large house standing prominent on the hill-side. Well, off we went to the chief's dwelling. And we found the people waiting for us before the house, which was decorated with flowers.

After mutual greetings, we took our seats on pandanus carpets, with crossed legs, — «fa samoa» (in Samoan guise). Two pretty girls set to work to prepare «kava»: and after partaking of the same, we sat down to dinner. My messmate (we ate in native fashion, off a banana leaf, on the floor) was the chief's daughter. I soon forgot the depression of the morning.

On the Samoan Islands we have no time for thinking of the past, for the present, if we live «fa samoa», always holds us spell-bound with its childish charm.

From Saasai by boat viâ the islands of Apolima and Manono to the island of Upolu.

(29 s. m.)

On the morning of September 14. the sound of the trumpet was heard in Saasai: — and now I felt the pain of parting from Saasai. The twentyfour-oared boat of Saasai



The twentyfour-oared boat of Saasai, before the island of Apolima.

was not long before it left the place with its pleasant memories. The oarsmen began a spirited song. For some distance we proceeded inside the reef.

Near to Saasai, on the shallow inner water, innumerable one-oared, outriggered canoes were floating: round them natives were swimming and diving, protected against the salt water by large black-rimmed spectacles. In their hands they held harpoons, with which they harpooned the

mussels, polyps and fish that came in with the flood tide. With their large, dark-rimmed spectacles they looked semi-human, half like some big-eyed, bobbing marine creatures.

After passing the reef water, we anchored in the channel between the islands of Sawaii and Upola, off the island of Apolima (14 s. m. from Saasai).

To the N., Apolima is a primeval crater open like an amphitheatre. We arrived in the bay before the open



«Pauesi Toleafoa» makes an excursion.

side by a narrow channel leading over a coral (barrier) reef. When the sea is running high, the harbour is unapproachable: but we rowed in through the «ava» of Apolima in calm weather, without the slightest difficulty. The light-coloured water of the bay, the crater overgrown with palms, together with the native houses peeping out from among the palms, forms a charming prospect that is at once revealed to the visitors newly arrived. The island of

Apolima is inhabited exclusively by natives. The crater wall descends precipitously on the outer side facing the sea.

From Apolima we rowed 5 sea miles to the island of Manono, which is also inhabited by natives only. Here I put up in the chief's house. It was Sunday (the 15th), a day on which the devout Samoans do not undertake any kind of work, not even rowing: so I could not leave Manono until the morning of the 16th. I seem to have won the sympathy of my host, or maybe my interpreter told wonderful stories of my doings: in any case the great chief of the island honoured me by giving me one of the family titles at his disposal, and as there was an empty «berth», nominated me chief...

In my capacity as chieftain, my name is Pauesi Toleafoa. The «tulofale» belonging to my sphere of authority is probably cudgelling his brains as to what to say in my name, should I one day return to the island of Manono, and maybe is considering which daughter of a many-carpeted chief he should choose for Pauesi Toleafoa — as his concubine (according to Samoan conceptions, concubinage is equivalent to marriage). Naturally all this would be the result of my chieftainship only if I so wished: for, being a *papalagi* (foreigner), I cannot be made to submit to the customary law of Samoa.

On Sept. 16, we rowed about 10 sea miles, from Manono to Magia, a port on the island of Upolu, from where I drove back to Apia, a distance of 28 kilometres.*

From Apia to Sydney.

(2441 sea miles.)

The Samoan Islands afford such a mass of material for observation, that we would gladly make months of the weeks set aside for a sojourn there. Travellers intend-

* V. infra. «The ceremony of installing a chief, on the island of Manono.»

ing to visit these islands will do well not to forget that there are no cables as yet connecting them with the outside world: anyone who omits to make provision for this fact will probably have the same experience as I had. Being unable to change my plans, laid long before and for a certain fixed time, owing to the fact that it takes a letter a whole month to reach Australia, my next destination, I was obliged to take ship on Sept. 28, though I would gladly have stayed longer.

The boat started late in the evening: and next day we stopped off the village of Mulifanua, at the N. E. end of the island of Upolu. Quite close to Mulifanua lies the island of Marono: and besides, we get a view of the islands of Apolima and Savaii.

We left Milifanua late in the afternoon of the 29th. Out of regard for the tourists, the ship sailed along the northern shore of Savaii. At the spot where the lava stream pours into the sea, we waited for sunset.

As the dusk grew in intensity, the tongues of flame licking the sea became ever redder in hue: while the background was illumined by the fire of the crater reflected by the low clouds. In the open cottages of the native villages lying on the shore, they had already lighted up: opposite us blinked the lamps of Fagamalo, and beyond, those of Safotu and Safune.

I began to make guesses as to whose houses the various lamps were burning: my recollections of the happy days spent there made more difficult the parting from the peaceful little world gradually fading in the distance!... «Tofa Samoa» (Adieu Samoa) ... though perhaps we may meet again.

The next afternoon we had an opportunity of witnessing a quite unusual postal service, off the island of Niuafoou (one of the Tongan group), about 260 sea miles to the S. W. of the island of Upolu. The postal packets to be delivered to the inhabitants of this breakwater island,

which is quite out of the ordinary line of traffic, were thrown into the sea, in a hermetically sealed tin box, about half a mile from the shore.

Two experienced swimmers chosen from among the inhabitants who were awaiting the arrival of the ship were floating about in our vicinity: they took the box ashore, paying no heed to the possible intervention of sharks!*

We stopped at the three ordinary landing-places on the Fiji Islands, — at the town of Levuka (island of Ovalau), at Suva, and at the Lautoka sugar factory situated in the western half of the island of Viti Levu. On the way to the harbour of Lautoka, we left a whole row of islands behind us, stretching from the N. E. to the S. W.

At Lautoka, the island of Viti Levu affords quite another prospect than on the southeastern side. The valley stretching along the harbour is occupied by a factory and a sugar-cane plantation: in the background, a ridge of hills crowned by bleak, weather-beaten, elongated rocks, crosses the end of the island. Boring experiments carried out at a distance of 7—8 miles from the shore have led to unexpected results: in the lower strata, minerals containing gold and copper have been found. Hereby the theory hitherto held by geologists, that viz: the western group of the Fiji Islands is of an entirely volcanic origin, has been exploded. The prevailing view at present is that the Fiji Islands are in part the remains of an old continent which has been covered over by the lava of more recent volcanic activity.

* The island of Nuafoou is situated between latitude $15^{\circ} 34'$ S., and longitude $175^{\circ} 41'$ W. From N. to S. it is $3\frac{1}{2}$ miles long: its breadth is 3 miles. The large central crater of the volcanic island is occupied by a deep lake 95 feet above the level of the sea. The water of this lake is slightly alkaline. Craters produced by the eruption of 1886 have sprung up on the eastern shore of the lake. According to eyewitnesses, this island is one of the most interesting geological formations of the south seas: but owing to its steep shores, it cannot be approached, with a craft of any size, except in absolutely calm weather.

On October 9, in the morning, the shores of Australia rose to view in the distance, in the form of a white line. At the sea entrance, the many-branched, fjord-like bay of Sydney is wedged in between steep shores of sandstone. After two windings of the fjord, on the two hilly shores coloured rows of houses rise into prominence: while in the harbour we can make out large ocean steamers and ferry-boats.

The city of Sydney (500,000 inhabitants) with its gigantic houses and comparatively narrow streets, gives one the impression of a town half-European, half-American. The main streets are very bustling: the shops, which are managed with English scrupulousness, seem to do a big trade.

As in every town in Australia, here too the ornament of the city is the botanical gardens kept like a park. The ethnographical and zoological departments of the Museum, and the collections of the technological museum are perfect. Here in the ethnographical museum, the collections of the island countries are not arranged by islands but by classes of articles, e. g. clubs, shields, jewellery, costumes, each represent a separate group, — a course that renders comparison extremely easy. In the zoological department of the Museum the artistically stuffed specimens of the feathered tribe are exhibited in a very tastefully arranged group very easy to review. The distribution is excellent in the technological museum too.

As for the sporting public of Sydney, during the races everything is bustle: of an evening in the hotels the ladies appear in magnificent evening costumes, while the gentlemen wear dinner jackets. In Sydney one thing is sadly lacking. — a permanent Opera on a European level, for without an Opera no city life is perfect.

The Samoan Islands again. „Palolo“ day in Apia.

(From Sydney to Apia 2441 s. m.)

On October 15, we sailed out of the zigzag bay of Sydney on the way back to Samoa. After staying for some time again at the towns of Lautoka, Suva and Levuka, on the Fiji Islands, we arrived at Apia on October 27. On our arrival we were greeted with the welcome news that the next morning there would be palolo-catching *en gros* But what is the «palolo»? It is a long, worm-shaped, headless marine creature: once every year it swarms on the surface of some bays in the Fiji, Samoan, and Guilbert Islands.

According to observations made by Dr. Friedländer and others, the creature called the «palolo» (in the Fiji group «balolo») belongs to the family of marine *annelida* (*Eunice virilis*), lives on coral rocks, and, at pairing time, generally on two consecutive days once a year, comes to the surface (the days are called great and little palolo-days), almost without exception during the last quarter of the moon.

The «palolo»-day for the most part occurs towards the end of September at the island of Sawaii (Samoan group), of October at the island of Upolu, and of November (occasionally in October) in the Fiji Islands — in 1885, «palolo» day was celebrated on December 25, at the island of Taviuni (Fiji group). According to the observations recently made, the front third part of the «palolo» never leaves the coral rock: while the hinder, thin, string-like part which appears on the surface on two days every year, supplies the spawn for propagation. The whole creature is about 40 centimetres long, — of which length 10 centimetres falls to the head and front part, while the hind part («palolo») is 30 centimetres long: the former part is 4, the latter 1½ millimetres in diameter.

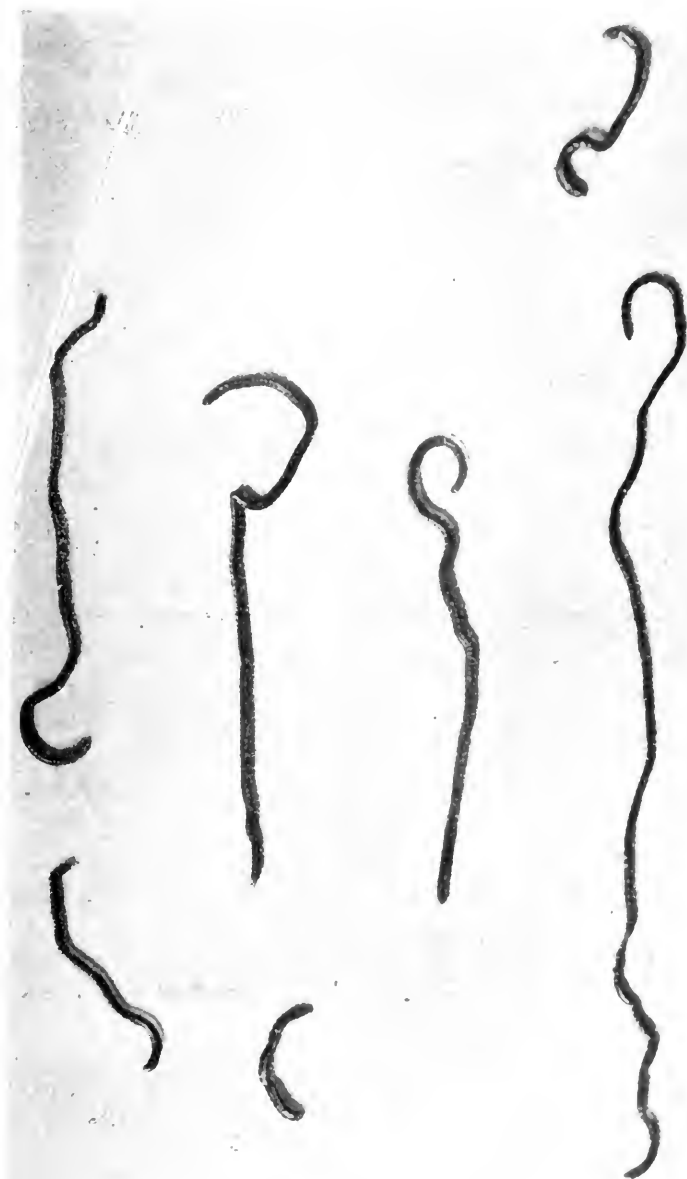
At several islands of the Pacific too a palolo-like creature appears at intervals: but no zoologist has yet determined whether it is the *Eunice virilis* that is found everywhere. There must be some difference between the Samoan and Fijian palolos, — at least that is the opinion of connoisseurs; who declare that the former is more palatable. The natives without exception are palolo-eaters: and many of the white men who have been for some time on the islands identify themselves with the taste of the native islanders. For this reason, the day on which the sea worm appears is a day of general fishing.

On October 28, about 4. a. m., I rowed out from Apia to the spot frequented by palolos: notwithstanding the early hour, I found a few native boats on the watch for the appearance of the creature.

The vanguard of the palolos appears about an hour before sunrise. Our boat was the first to make a catch. Our success was the signal for a lively shout followed by an outburst of cheering from the other boats. Now everybody set to work catching palolos: the catching was done with the hand or, for the most part, with small butterfly-nets, with which they hauled out the living spagetti (palolo), — and every big catch was followed by laughter and joking. When the sun had risen, I was better able to observe the company of fishers. The men had come in outriggered canoes; the girls sat in boats in threes and fours, with the «ula»* worn on festive occasions or while on a voyage (malaga) round their necks.

* The «ula» is so essential a part of Samoan costume, that it will be proper to devote some space to a short description of the same. The «ula» is made of the elongated claret-coloured berries of the *Eugenia* sp. shrub, or of the coral-coloured clusters of the fruit of the pandanus. Generally either the one or the other is strung on a cord; sometimes both: and then petals of flowers are put in between.

Girls and women hang an «ula» on the necks of relatives and acquaintances about to set out on a journey: and new arrivals are also offered a similar compliment by their host. A girl in love offers the man



The «palolo»-life size (after a photo by Mr. Andrews, photographer, Apia).

Until sunrise, the hind part of the so called palolo (*Eunice virilis*) floats at full length on the water. The largest swarm coincides very nearly with the rising of the sun: then the end of the swarming comes very rapidly. The earthworm-shaped, brown body, which swims in a long line or in serpentine fashion, now breaks up: the separated parts wriggle like rainworms, and when the sun has fully risen, cover the wavy spots like greenish-yellow foam.

At Apia, the palolo is caught close to the coral reefs in water a few metres deep: I did not see any floating about in shallow places.

The natives either eat the palolo at once in the raw state, or boil it. Both the dead specimens and the boiled parts are of a dark green hue. The animal when boiled tastes like boiled spinach.

The Eldorado of palolo-fishers is the western shore of the island of Upolu: here the creatures swarm in such numbers over the water that a handkerchief thrown into the sea is lost to sight a few inches below the surface.

According to the observations I made, the palolos for the most part appear on the surface of the water in large shoals, — a fact that is perhaps due to the action of the waves.

I put a few whole palolos on my handkerchief: on touching them, they broke to pieces at once, and a thick yellow liquid issued from the broken parts.

On the «palolo» day, in warm calm weather, huge waves of surf were breaking over the coral reef. According to the ideas current among the Samoans, this high swell is connected with the appearance of the palolos: they believe that the arrival of the palolo adds to the size of

of her choice an «ula», — a gift reciprocated by her admirer. Consequently the «ula» is the emblem of courtesy, respect and devotion. And the «ula» is of significance not only in the Samoan Islands, but also (in a similar sense) in the other South Sea Islands.

the ocean. If we put it the other way round, we shall probably not be far off the truth: for the final development of the palolo, which is now ripe for propagation, in all probability there is need of a warm day, while the rising to the surface of the creatures can be aided by the surf(?).

Excursion to Pago-Pago (pronounced Pango-Pango) the naval station of the Samoan Islands under American suzerainty.

(70* sea miles.)

Apia and Pago-Pago* are connected by the S. S. «Maori», of 400 tons' burthen. The «Maori» is an old hulk; but she is quite seaworthy enough for a voyage of 70 miles, especially in the Samoan Islands, where the communication between the various islands is still kept up by small sailing-boats and row-boats. On October 28, in the evening, I started on the «Maori», and on the next day, at dawn, we arrived at Pago-Pago, the port of the island of Tutuila (American Protectorate). The fjord of Pago-Pago, which stretches far inland, is an ideal harbour: the hills overgrown with bush surround the bay so completely, that the sea water is as smooth as a mirror. To the right of the entrance, along the foot of the steep hill, native houses lie scattered, while along the quay to the left built at great expense, may be seen the dwellings of the naval officials, the offices, the hospital, and the only hotel: to the left, on a projecting ridge, the palace of the Governor

* The Tutuila, Aunuu, Manua and Rose group of islands under American supremacy are situate between latitudes 14 and 14.5 S., and longitudes 169 and 171 E. The aggregate population of the islands is estimated at 6000, — of which number 4500 fall to the islands of Tutuila and Aunuu. The aggregate area of the islands is put at roughly 136 sq. miles. The only article of export is the «kopra» (dried cocoa-nut).

too has been built. The funnels of the warship «Anapolis» were smoking lazily on the calm, smooth water of the bay.

The U. S. A. possesses few colonies of a more charming and cultivated nature. From the highest official downwards, everybody comes to the assistance of travellers: and during my sojourn there of two days, I never once heard things judged by the «money» standard, — a state of things which is a rarity among Americans.

On the 28th, in sunny weather, the life in the bay was a delight to witness: but next day we had a dose of the Pango-Pango showers. The clouds chased each other through the entrance to the bay, pouring their abundant fountains on the peaceful colony which was already accustomed to weather of the kind.

In the Pango-Pango Hospital I made the acquaintance of an interesting individual, — Tuimanua, the king of the Manua islands, who resided on the island of Manua, about 60 sea miles to the E. of the island of Tutuila, was a patient in one of the wards. His ancestors of old ruled not only over the Manua group consisting of the islands of Tau, Oloosega and Ofu, but of the whole group of Samoan Islands. The island king was there with a large suite: his subjects visited him from time to time, coming from the Manua islands. During my stay there, two boats arrived, laden with comestibles.

From Apia to Satupeitea.

(On the western shore of the island of Sawaii, 40 sea miles from Apia.)

From the island of Tutuila I returned to Apia. On November 2, I started again on a sailing boat of 20 tons' burthen belonging to a local merchant. I soon got into conversation with the well informed merchant, who was thoroughly acquainted with local conditions, with the life and history of the Samoans. With a favouring breeze we rapidly approached our destination.

After passing round the south-eastern cape of Sawaii, we left the island of Apolima that rises abruptly out of the sea, to our left: while to our right we caught sight of the hill of Tofua standing at the south-eastern corner of the island of Sawaii. Both the island of Apolima and the hill of Tofua are old craters. The waves dashing on the steep shores shoot up high spouts of salt water, in many places through caves. The natives consider the passage round the S. E. cape one of the most disagreeable waterways of the island.

To row into the bay of the village of Tofua, standing at the foot of the hill of the same name on the sea shore, is not advisable except in very calm weather, owing to the shallow water all round.*

At a distance of 40 sea miles from Apia, in the bay before the village of Satupeitea, we met a very large shoal of dolphins. Besides the multitudes of the latter, in several places we came across the *atu* (borito) fish. The latter, while hunting for smaller fish, several times leaps out of the water, — and swarms of gulls pounce upon it. At first sight, we imagine that the little birds may perhaps do some damage to the big fish — but that is not their object; they are after the small fish, and the bonito leaping out of the water is merely their vanguard. The natives row far out to sea to catch the bonito with hooks made of shells.

* Landing over the coral reef surrounding the island of Sawaii is in most places a risky business. The shallow entrances full of coral banks and rocks could not be made navigable for large ships except at enormous expense, which is quite beyond the resources of the comparatively small island: consequently it is probable that Sawaii will never have a regular service of steamers. Considering that the Governor has kept the island for the use of natives, there is every prospect that the primitive Samoan customs will be maintained here even when, in Upolu, everything has become a medley of Europeanism. And this is why, boating round Sawaii, I was always delighted to see the dangerous spots accessible to Samoan boatmen only.

On the zig-zag dark lava shore, Satupeitea, with its houses peeping out from among rows of palms, is one of the prettiest spots on the island of Savaii.

From Satupeitea to Salailua.

(25 sea miles.)

.Samoan banquet. The lava-cave at the village of Sagone.

We sailed 25 sea miles from Satupeitea to the village of Salailua along a steep lava sea-board. All along the shore the foam of the breaking waves describes a white line: while through the openings of the caves the smoke-like froth of the salt water leaps up unceasingly. The back ground is composed of the rows of palms flanking the shores and, in the interior, the hills overgrown with forests: on the sides of the lofty hills we see two waterfalls.

Till reaching the southern cape we had a favourable breeze behind us: but the moment we doubled the cape, the breeze suddenly ceased; and with flagging wings we awaited the turn of fortune. It was in vain that the sailors whistled; the wind refused to come: so we were obliged to get over the remaining 5—6 sea miles by the help of the oars.*

From the bay of Salailua, a twelve-oared boat came to meet us: and taking all the necessary supplies with us, we rowed ashore to the sound of singing. The black lava shore of the bay is skirted by dense green underwood: from the shrubs bryony is suspended, climbing up the dark walls; while here and there, from the luxuriant thicket, groups of palms peep forth. This all is the work

* The southern cape is well known to Savaiian boatmen as a «wind-shed». Here the direction of the winds is influenced by other lofty hills on the island.

of primitive Nature: and yet, in point of arrangement, this lovely country full of peaceful concord approaches more nearly to a park than to real bush.

At Salailua, as in several villages on the island of Sawaii, the spring water bubbling forth from beneath the lava on the sea shore is collected in lava reservoirs partly artificially built around the springs.



Bathing in the spring, on the island of Sawaii.

When we arrived we found all the village, young and old, bathing loudly and merrily in the water of the brook. We landed at the bathing place: and my camera was at once in action.

One of the chiefs of Salailua, with his «taupo» daughter, had accompanied us from Apia. On the day of our arrival we paid a visit to his family: and the «taupo» invited us to supper next day. Before supper the chief

helped his daughter to do the honours: but he soon retired, silently, without a word of farewell, like an English lord.*

The grace usually said before meals was pronounced by one of the «tulofale» (spokeswomen) guardian angels of the taupo, in place of the head of the family. After the grace had been said and a song sung, we set to work on the feast.

On banana leaves placed lengthwise on the floor, well roasted sucking pig, chickens, talos, yams, bread fruit and other Samoan dishes were served. The sucking pig and chicken were «carved» by hand: this part of the business was soon over, and we at once began to appease our hearty appetites. The Samoan «tables» are not usually provided with knives and forks: but whenever a white man sits down to the banana leaf plate, is provided for his use. At times the «taupo» too tries to manipulate a knife and a fork, but in most cases breathes more freely if we too employ our fingers «fa samoa» (in Samoan fashion), when she is able to return to her ancestral custom.**

From the quiet conversation of a Samoan chieftain or a «taupo» we should not expect them to have recourse to this primitive method of eating: but, sitting on the floor beside the banana leaves, we soon find the custom an acceptable one, and from that moment are only too glad to bite a piece off the chicken leg offered us by the clean little hands of the «leading lady». After meals, water for washing the hands is taken round in a little wooden dish. And finally the guests are offered tobacco wound in dried banana leaves («tufaga», pronounced «kufanga») . . . the kufanga is generally rolled and lighted by one of the girls.

* We were the guests of the «taupo», and he did not wish to be *de trop* in the company. This form of procedure is prescribed by Samoan decorum.

** This description does not refer to the above case, when the «taupo» hostess was an adept in the use of knife and fork: but as a detail requisite to the completeness of a general description, I thought this the best place to mention it.

As soon as the guests have finished, the members of the household and the obliging relatives sit down to a row of banana leaves spread along one of the sides of the house. Here too, as always, everybody is placed according to his (or her) rank.

In Gagamaloe, one of the villages adjoining Salailua, we were again the guests of a «taupo». The taupo of Gagamoloe, with her dignified manner, was every inch the type of Samoan which the influence of the over-zealous missionaries has not yet succeeded in depriving of its own true originality. Aituivi (or Tuitui), in ancient Samoan costume, presented a perfect Samoan dance.

I walked from Salailua to the village of Sagone 4—5 kilometres distant, to visit the lava cave stretching some 600—800 metres inland from the sea. The cave is arched in shape: on its roof the lava has produced stalactite-like formations a few centimetres long. Among the bluish black stalactites of shining lava there is a later deposit of whitish lime-like material, which here and there has crusted over the lava stalactites. Should the formation of this lime-like material assume larger proportions, in the course of centuries the lava cave must wear the appearance of a true stalactite grotto.

At present the arched roof might be compared to a relief map turned downwards. In one part of the cave a spring trickles towards the sea. For some distance the cave is double: the opening through the partition wall shows clearly how a later stream of lava overran the earlier one that had previously in part been cooled down. The lava that has flowed more recently through the opening has assumed the form of very brittle, crumbling slabs.

From Salailua on foot N. E. to Safune.

(34—36 kilometres.)

The district of the craters of 1880 and 1902.

We started from Salailua on Nov. 6. 1907, at 6. a. m. Besides the interpreter, I had five men with me — a guide and four porters. We soon left the good road to pursue a path cut through the underwood: and we found ourselves in a sad pickle! In the rainy season, between November and April, the bush is never dry: so pedestrians have to plod on up to their necks in moisture, — and that is what we had to do. In the oblong valleys to be found here and there in the forest overgrown with dense, impenetrable shrub thickets, talos and yams are grown.

After two short «breathers», about 4. p. m. we arrived at our quarters for the night. My men covered the twig tent found here with wild banana leaves: and we set to work to dry our clothes and cook the dinner beside the fire we had made. The thoughtfulness of my men was quite providential: for towards evening we were treated to a thoroughly soaking rain; and, considering the coolness of the mountain air, it would not have been agreeable to have to spend the night outside our primitive shed.

On the 7th, with two companions, I started to look for the crater which was active in 1902. Scarcely had we started, when it began to rain. The path that had been used at the time of the eruption was now impassable: the weeds were over our knees. With his long-handled Samoan knife my guide began to fight the weeds that obstructed our path.

We ought to have reached the crater after two hours' walking. The two hours were over, the third was nearly over, — and yet no sign could be seen of the spot we were looking for! Signs there were indeed, for lava cinders covered the soil: but, as in the dense rain we could not

make out our whereabouts from the look-outs, we had nothing left but to return to our camp. We arrived there after 11 o'clock: and after a scanty lunch, started on our way towards the crater that had been active about 1880. The woods stretching all round the crater have grown up on the lava beds produced by the latter eruption.

At about 4. p. m. we arrived at a little hut, from which a well-worn path leads to the crater of 1902: but as the continual showers had damped my ardour and made me disinclined to walk along ankle-breaking paths, we sauntered on to the village of Aopo, where we arrived about 6. p. m. After spending two nights with the hospitable chief of the mountain village consisting of some twelve houses, on the 9th we continued to walk on northwards. The road, which leads over a lava field 150—200 years old and through woods, passes several villages. The lava must have been very liquid, as proved by the comparatively flat surface and the formation of the lava.

Near the village of Sasina we reached the shore: and from here, a short walk, we reached the village of Safune, which lies to the E. After two days' rest in Safune, on November 11, in the morning, we arrived by boat at Fagamalo, some 5 sea miles distant.

Talōfa Fagamalo!

«Talōfa* Fagamalo! talōfa Soli'ga, Sile'sa, Tae (names of girls)» . . . greetings to the pleasant place, and to the charming acquaintances! *Williams*

My English friend, Mr. W. . . ., had already had a native house furnished for my convenience: so I was able to continue to lead the life I had been leading in September. I could observe the life of the natives: and of an evening I could stroll by the light of the volcano streaming through

* Talōfa is a Samoan greeting, and means roughly: — «My affection with thee».

the foliage of the palm-trees, bound by the enchanting spell of the Southern Sea.

Since my last visit, on October 6th, at 5.30 p. m., a tidal wave had been to Fagamalo: the height of the wave which broke over the coral reef was estimated at 3—4 metres. All along the low-lying shore the wave had done some trifling damage. But it is not for this reason that the fact deserves to be recorded: the real cause for my mentioning it is that, since the eruption of 1905, this was the 7th tidal wave observed locally. A full list of these waves is as follows: —

1. 1906. XI. 28. (5.30. p. m.) — full moon on Nov. 30.
2. 1907. VI. 8. (12 noon) — new moon on June 10.
3. 1907. VI. 19. (3. a. m.) — first quarter on June 18.
4. 1907. VI. 27. (6. p. m.) — full moon on June 25.
5. 1907. VII. 9. (6.45 a. m.) — new moon on July 10.
6. 1907. VII. 25. (6. a. m.) — full moon on July 26.
7. 1907. X. 6. (5.30. p. m.) — new moon.*

The villages stretching from Fagamalo to the lava emitted in 1905 are, besides, threatened by salt rain. This salt rain is produced by the gases evaporating from the flow of lava into the sea. The salt gases do considerable damage to the vegetation: just outside the villages situated close to the lava, the banana and bread fruit trees have been destroyed: the cocoa-nut trees too promise but a poor crop; and, moreover the salt rain which falls very often spoils the drinking water.

* The tidal waves observed at Fagamalo are in all probability connected with the active crater. I may mention at this point that during my sojourn in the Samoan Islands, I twice observed earthquake shocks, 1. on Sept. 22, 1907 in the afternoon. 2. on Dec. 14, 1907 in the morning. On both occasions I was on the first floor of my hotel at Apia. The wooden building went through a series of oscillations that can have been due to an earthquake shock only.

By boat round the island of Sawaii.

(115 sea miles.)

State reception at Falealupo.

The Samoans as swimmers. Critical moment. A hill formed on the shore by the lava pouring into the sea.

We ordered a boat from the village of Safune for the morning of November 11, to row to the N. W. corner of the island of Sawaii, to the village of Falealupo. The twentyfour-oared open boat arrived at Falealupo by 4 p. m. The whole night there had been a gale of wind, with thunder and lightning. In the morning of the 11th the waves were running so high that before starting, we had to deliberate as to whether we could venture in such weather in an open boat, without ballast. I left my fellow-traveller, the worthy head official of the island, to decide: his opinion was that we could go, as we should get the waves from behind and our light craft with its sail set before the wind would drive in front of the billows. The waves rolled along by the unceasing wind which blew without intermission from the same direction were unable to fill the boat with water, and we flew along, racing the breeze, with treble sails set. In front of Falealupo, where the ordinary current met the waves driven by the wind, once or twice we were dangerously near to upsetting.

Of the two entrances to Falealupo, we chose the less easily accessible one, which was nearer to us. Here the waves break over rocks standing out of the sea. The entrance lies between two rocks of this kind distant about 10—15 metres from one another. The waves advanced sideways: so we rode in, straining every muscle at the oars, on the side from which the waves were driving.

We had traversed 27 sea miles in $4\frac{3}{4}$ hours, — a record for a boat in point of speed, in the given circumstances.

Falealupo is rather outside the general routes, — a fact that may be gathered by the customs of the inhabitants. On our arrival we were welcomed at the gaily decorated «town hall» by all the chiefs of the neighbourhood. After the usual formal greetings the «kava» cup was passed round. After partaking of this beverage, we proceeded to our quarters: here too the beams of the houses had been decorated with garlands of leaves and flowers. Scarcely had we settled down when the chiefs and «tulofales» (spokesmen) appeared again; each of them took the place due to his rank, and the series of speeches began afresh. There was a drinking of «kava» too prepared by a pretty wild-eyed girl. On her two cheeks and forehead red petals of flowers were glued: while under her nose she had made herself a moustache, — with the aid of soot. The quaint ornamentation suited her pretty little face to perfection.*

After the «kava» had been partaken of, three men, decked out with strings of green leaves on their legs, waists and arms, with a wild whoop brought in a kava-dish of tafolo, — dumplings of bread-fruit boiled in coconut milk. The «gruel» was spooned out with the hand on to banana leaves: and in a moment this soup, specially reserved for festive occasions, was distributed. Every moment I found an opportunity for taking photos: I did not save my films, rejoicing in anticipation at the characteristic collection I should thus become possessed of.**

On November 11, in a twelve-oared boat, we made for the exit from Falealupo. When we got to the spot, the

* Ornamentation of the face with petals of flowers is a common custom in the island group.

** My rejoicing was premature, — for they had given me old films, and so very few of the hundreds of photos I took during my tour were of any use to me. Photographers are very often annoyed in this way in the tropics with their large proportion of humours. In some cases the warm moisture damages the films, in others it is the development that is faulty, while in others the films bought a great distance away are bad, — as was the case with me.

oarsmen paused for some time: uninitiated spectators would have thought they could not fight against the current, — but they were only waiting for a favourable wave, over which they pulled the boat, without our getting a ducking.

Doubling the N. W. cape of Falealupo, we started off southwards along the western shore of Sawaii. The steep lava shores are here overgrown with bryony suspended from the palmtrees and those of a primeval forest. Right down to Salailua — 18 sea miles distant — the shores of the island display a constantly changing pomp of scenery.

I had often heard — and several times seen for myself — that the natives were excellent swimmers: on this voyage I had many opportunities of testing the truth of the statement. About an hour before arriving at Salailua, our oarsmen suddenly slackened pace, and two men dived head foremost into the water. The two divers made straight for the shore: one of them was swimming with one hand only, in the other holding some Samoan carving out of the water. I wondered how they would ever reach shore here, where the huge waves coming in from the open sea were breaking with tremendous force over the lines of reef stretching all along the coast... They wait for a suitable wave and get to dry land, without mishap, on its crest. I watched them for some time. As they waited in front of the dangerous line of billows for a favourable wave, they swam about in one spot. In the meantime our boat had progressed so far that I was unable to make out their arrival on shore. But there can be no doubt that they are great adepts in the art of swimming.

After passing three never-to-be-forgotten days at Salailua, among my acquaintances, we rowed out to sea on the 24th, by moonlight. After doubling the southern cape, we arrived at the most troubled part of the sea round Sawaii. Here the waves break along the zig-zag shore in an absolute disorder, here and there, in shallow places.

forming rolling hills a few hundred metres from the coast. We made southwards to the accompaniment of the rumble of the waves dashing on the shores. All at once a wave mountains high caught us on its crest: the boat almost stood on end. Our steersman had probably taken us on to a wave that had come in collision with a shoal? The sailors ceased singing; for some time they discussed the occurrence, but could not come to a unanimous decision: some of them voted for the theory already mentioned, others — among them W . . . — were unable to give a satisfactory explanation. One thing is however certain: had we not had a large quantity of eatables to serve as ballast, and had the shock been received by any other part of the boat but the bows, we should have finished our boating excursion on the steep lava shore.

The Samoans are nearly always invaluable on a malanga (voyage): but I have rarely met so excellent a crew as that with which we undertook this night voyage. They rowed through the night without a rest: when the oarsmen tired, the steersman succeeded, by the aid of words of encouragement, in prevailing upon the leader of the chorus to produce a faint head voice, — and the comparatively heavy and overburdened boat was sent on its way with renewed vigour.

On November 25, in the morning, we landed at Palauli, 25 sea miles from Salailua. After two merry days spent at Palauli and Satupeitea, we started again on the 27th, with a crew of 16 oars. After passing the tossing sea that usually whirls round the southeastern cape we arrived at Salelologa (12 sea miles) on the eastern shore, by a stretch of reef-protected water. From Salelologa I drove 10 miles to the village of Saasai, also situate on the eastern shore.

On November 29, we brought our tour to a conclusion, proceeding in $4\frac{1}{2}$ hours with the large boat of Saasai, manned by 26 stalwart oarsmen, back to Fagamalo,

— a distance of 23 sea miles. We left Saasai by the boat-up-setting exit: but in the calm weather then prevailing we got out to sea without mishap.

On this day the lava was pouring into the sea in a narrower stream than that I had seen on October 26—27, on my way from Sydney. The lava field stretching from the crater to the sea shore was giving off denser fumes



The lava pouring into the sea, with the hill built of the fragments shot out of the sea (Island of Sawaii).

-- and in a greater number of places -- than it had done previously, a fact that proved that the lava was searching for new outlets in several directions. The lava cinders shot with the detonation of an explosion out of the sea on to the shore had already built up a fair sized hill, which from a distance looked like a semi-crater.

Second visit to the active crater of Sawaii. Walk on the lava field that has been in course of flowing since 1905.

On November 17, following the programme mapped out on September 3, we rode from Fagamalo to the Olonono plantation, and from there walked the remaining distance to the crater. The latter had not changed essentially. Its brink was more cracked, in a few places quite broken in: but on the whole it was the same as ever. With a favourable breeze I could now make out quite clearly that the lava did not flow out of the crater in a N. E. direction only, but that there was an outlet on the south side too. Considering that, at the commencement of the period of activity, on the southern side (when the lava overflowed the brink of the crater) the lava had stopped at a distance of not more than 200—300 metres from the crater, and so but little fresh lava could find room beneath it, it may be supposed that either the gush of lava on this side was a moderate one or that this stream of lava after passing round the crater, united with the northern stream. There is also a third possibility, — viz: that on the southern side the lava found some basin into which to flow.

At the beginning of December news was brought to Fagamalo that, close to the sea, partly on the field of cooled lava, the stream was continually looking for new outlets. In order to convince myself of the truth of the report, on December 4, I started with one companion from the village of Salealua adjoining the lava of 1905, in the direction of the new stream already spoken of. After walking for a good half hour, we found the trodden path cut off in front of us by the recent stream which was flowing about an inch thick over the old lava, advancing very slowly. The cooling surface of the highly molten matter reminded me of mercury, both in point of shape and colour. The molten lava, about 150—200 meters in dia-

meter, was bursting from cracks in the old stream. Above some of the holes (probably cavelike in appearance), where the new stream of lava found water, thin columns of fumes were rising up to a considerable height.

Rain overtook us: but we continued to explore. As we were near the sea shore, we first of all visited the spot where the lava poured into the sea in 1906. This latter spot is a few hundred metres — maybe a kilometre — farther off than that where the stream of today is flowing. At the point where it emptied into the sea, the lava cinders shot out of the water have formed a semi-cone opening seawards. Large pieces of cinder may be seen lying about. At times the heavy, blackish-blue cinders, which are of the brilliance of glass, assume a steel-grey hue when broken. On the surface of the cooled lava, from the semicone of cinders towards the crater, i. e. southwestwards, four or five round earthwork-like elevations stretch in a prominent manner. I inspected the one lying nearest. In the said spots, the lava that flowed in 1906 seems to have blasted the cooled lava field stretching above the stream, forming a kind of fortification of the lava stratum thus brought to the surface around the crater-shaped cavity thus brought into being.

We went from the spot where the stream of 1906 flowed into the sea to that where the lava is still flowing. In some places we found ourselves walking on a freshly-cooled surface of lava: and at last a stream of molten lava several metres wide intercepted our path. Consequently we were unable to approach nearer than about 150 metres to the spot where the lava cinders were being shot out of the sea on to the shore.

Here too the cinders have formed a semi-cone on the shore: while on the lava field, on the crater side, we again see earthwork-like formations produced as above described. We returned to Fagamalo from the instructive excursion towards evening.

From Fagamalo viâ the island of Manono to Apia.

(63 sea miles by boat.)

The ceremony of installation as chief on the island of Manono.

On December 11 I finally bade my acquaintances of Fagamalo farewell. Rowing along the shore, we were so near to the outlet of the lava, that for some distance the boat glided along in practically boiling water. In the beautiful sunny weather, I took a few photos, trusting that, being so close, I should get the flying pieces of lava into the picture: but, owing to the badness of the films, I had to throw away these photos too.

Rowing in through the entrance to Saasai, for some distance we travelled over reef-protected water, then passing over the open sea between the islands of Sawaii and Upolu, we made for the island of Manono. We landed at the village of Salua on the latter island. On September 16, Tautou Pauesi, the chief of the village, had endowed me with one of the ownerless titles of his family: and my present object in coming was, following the Samoan custom, to give a modest banquet to the islanders, and at the same time to return, with best thanks, the chief's name and rank (often employed while partaking of «kava»), of which I could make no use in Europe, the «continent of the great powers» (as they call it in Samoa).

As, on the occasion of my first visit, the chief had been unable to comply with the festive formalities connected with the granting of a title of this kind, he had postponed the ceremony of installation until my return. As soon as we arrived, couriers were sent out to assemble the dignitaries of the neighbouring villages: and the distinguished company, who arrived in no time, took the places assigned too them.

The place of honour was reserved for me, at one end of the house, on a finely plaited pandanus carpet: opposite me, at the other end of the house, were ranged the chiefs of tribes and the «speaker» chiefs. The «plebs» ranged up outside, all round the house. Then the official «spokesman» of the village delivered a short address of welcome, to which the «tulofale» sitting on my left (who had been placed at my disposal) duly replied in my name. After the inaugural speeches, «kava» was handed round: I drank from a new cocoa-nut shell reserved for my exclusive use. I have the cocoa-nut shell still in my possession: it will always remind me of the fact that «I was once a chief too in Samoa!»

After the «kava» had been disposed of, the «tulofales» began an unceasing series of declamations. With my own primitive knowledge of Samoan (I had learned about 500—600 words, and had gone through the grammar) I cannot express an opinion on the speeches: but well-informed acquaintances who have heard them tell me that the «tulofales» of Samoa use very choice flowery language, — a fact that is the natural outcome of the character of the Samoan tongue and of the social customs.

My village «tulofale» endeavoured to make me understand him by the aid of mimicry and gestures. He pointed to the sky, to his heart: and delivered what he had to say in accents so warm that his melodious elocution almost affected me to tears. At the proper moment I chimed in with a «fa afatai' tēle lāva» (my best thanks), which had the desired effect . . . At this juncture an eloquent «tulofale» of Fagamalo who, by the kindness of Mr. W . . . had accompanied me, started to speak. To judge by the attentiveness of the whole audience, he must have delivered a fine oration. He laid stress on the sympathy I felt for the Samoan people, thanked them in my name for the title and rank bestowed, and finally declared that, as I was leaving the islands, I begged the granter to take back the title

and rank etc. This was as it should be. Pauesi, my whilom relative, has the title at his disposal again and can present it to some other «loving heart» who will perhaps treat the villagers to similar festivities.

In the evening dancing and singing followed. Among the singers I was particularly struck by one tulofale over middle age whose name was Apaau. He sang ancient war-songs, with the talent of a true first-class performer. This species of Samoan poetry is unfortunately but rarely to be heard in the islands.

CHAPTER XI.

To the Philippine Islands viâ Auckland (N. Z.), Sydney and Brisbane, and the Bismarck Isles and New Guinea.

From Apia viâ the Tonga Islands to Auckland (N. Z.).

(1661 sea miles.)

New Year in New Zealand.

I started from Apia on Dec. 24. 1907, by the S. S. «Atua» bound for Auckland viâ the Tonga Islands. We arrived in the harbour of Auckland on New Year's Day, at 7. a. m. The crew had told me in advance that, as we had got a few hours to the good on the way, we should be able to enjoy the whole of New-Year's Day from morning till evening, in Auckland. But as we had to wait two hours for the doctor to inspect the passengers, it was 9 o'clock before we landed. This is not the first occasion on which the ship-doctor of Auckland has kept a boat waiting. The conceptions of the labouring classes, who cling obstinately to the appointed hours of work, seem to have possessed him too. His official hours begin, namely, after breakfast — usually taken at 9. a. m. He shows no regard for the crew who are obliged to spend Christmas and other holidays on board, — for their sakes he could not leave his breakfast: — well, we are influenced by the example of others, even though they be our inferiors, provided the results are of advantage to our precious selves!

The harbour was alive with gaily beflagged boats about to start with excursionists: — all the more depressing was the picture presented by the streets of the town; the idlers did not enhance the festive nature of the scene; in their coloured clothes, with peaked caps on their heads, and under the influence of whisky, they made a very vulgar impression on the newcomer. On the following day the general idleness was continued. The banks contributed their fair share of the do-nothings. Everywhere I saw a notice over the premises of the banks in the main streets, which read, «closed from Dec. 25 till Jan. 3.» The New Zealand holiday-makers care very little about the views of the commercial world and travellers in need of money!

The Auckland Racing Club held its Derby on January 1. The race course swarmed with people; any town in Europe with a population ten times as large would be very satisfied with a meeting so attended. The «fields», almost without exception, turned out in full strength. As for the course itself, I may say that it is worth a visit even from people who do not care a pin whether the blue or red jacket comes in first. Beside the barrier enclosing the course, all along the grand stand, beds of flowers were ranged in all the pomp of colour: while the trees of the paddock were also planted all round with fresh flowers. All this added considerably to the splendour of «Derby day».

From Auckland to Sydney.

(1281 sea miles).

The Jenolan stalactite cave.

Starting from Auckland on January 6, on the 10th I arrived in Sydney. The inhabitants of the Capital think that January is the warm season: but to me, after the warm moist weather experienced in the Samoan Islands, the «warm» climate of Sydney seemed cool.

As it was summer, I made excursions to the watering places. Of the many places of the kind round about Sydney, the most are to be found in the district of the Blue Mountains: e. g. Katoomba (65 miles from Sydney), Blackheath (72 miles), Medlow Bath (69 m.), Mount Victoria (76 m.) etc., are all stations on the line leading to the Blue Mountains. From the watering-places mentioned excursions are made to the famous Jenolan stalactite caves, to various waterfalls and points whence fine views may be obtained.

For a longer stay, Medlow Bath, 3446 feet above the level of the sea, is the most popular. The extremely comfortable sanatorium is situate in a park: its common rooms, large and small sitting rooms, billard room, and its glass-roofed corridor 600 feet long with the walls hung full of oil paintings, must satisfy the desires of the most fastidious.

It was from here that, on January 11, with two companions, I started by motor on a visit to the Jenolan cave. The splendidly kept carriage road 42 miles long affords many beautiful views. Of a morning and towards evening, the Blue Mountains are wrapped in a bluish white mist, — that is where the name must have come from. Towards the spacious valleys, the sandstone hills running parallel to the sea descend precipitously, in some places to a depth of 3000 feet. The sand-stone hills are succeeded by others of granite. Into the granite hills, for a width of some 2—3 miles, a vein of limestone has become wedged, — this is the district of stalactite caves.

The Jenolan cave is extensive, and divides into several branches. One of these branches follows a stream of water: while into another branch we follow the line of stalactite formation to a height of 355 feet, with a gradual ascent from the entrance. That part of the stalactite cave, discovered long years ago, has been devastated by tourists: but those parts discovered since the Government took over

the control of the cave will be found intact. In the spots where new formations are continually taking place, the stalactites are possessed of an ice-like, shining exterior: and, where the lime deposits have become crystallised, even the complete formations are of a gleaming brilliance. We can walk comfortably from one end of the Jenolan cave to the other on artificial paths and stairs cut out of the stone. In



«The wallaby squatting on the rock ,begged'.»

the cuttings made while building the paths, we can see the intersection of the stratum of limestone forming the basis and of the new deposit, the stalactite upper crust: here the work of civilisation has succeeded not only in offering an increase of comfort but in aiding the task of geologists.

The Jenolan Cave is situated on territory preserved by the State, — a fact that finds outward expression in the fauna of the place. On our way there in the morning we saw

small parrots, laughing jackasses (*dacelogigas*), Australian magpies (*gymnorhina*), and scores of other birds by the side of the road: while near the cave we caught sight of the «wallaby» species of kangaroo. This dark grey animal, of the size of a hare, takes no notice of anybody: in order to make a wallaby sitting on a rock stand on its hind legs, we pelted it with pebbles, — and really, instead of running away, it «begged».

From Sydney, viâ Brisbane, to the port of Herbertshöhe in the Bismarck Isles.

(1866 sea miles.)

The German «Norddeutscher Lloyd Steamship Co.» has a service of steamers running once a month between Sydney and Japan. This line, from a tourist's point of view, is one of the most interesting sea routes. Starting from Sydney, the steamers stop first of all at Brisbane, the Capital of the province of Queensland (498 sea miles). The next station is the port of Herbertshöhe (and Simpsonhafen) in the German Protectorate of the Bismarck Islands (1866 sea miles from Sydney), the third, Friedrich Wilhelmshafen in German New Guinea (2293 sea miles from S.), the fourth, Manila, the Capital of the American Philippines (4319 sea miles). Then follow Hong-Kong (4945 sea miles), Yokohama (6549 sea miles), and Kobe (6902 sea miles from S.). I left Sydney on Jan. 14, 1908, in the afternoon, by the Norddeutscher S. S. «Prinz Sigismund», of 3300 tons' burthen, intending to stop at one of the islands on the way to Hong-Kong. In comparison with those of the New Zealand Union S. S. Co., the fares of the Lloyd are high: but we are only too glad to pay the excess, for the cuisine is far-famed for its excellence. Besides, I could scarcely realise that I was not on an English boat: for, as the majority of the passengers on this line are English, the company has

made provision accordingly. On the time-tables, bills of fare, and other printed matter, we find the English text side by side with the German one: many of the ship's officers speak English: and we may say that the prevailing order of things adopted is Anglo-German. Passengers who prefer English customs and tone of conversation will therefore find themselves perfectly at home on this non-English line of steamers.

On the morning of January 16, without having once been out of sight of the eastern coast of Australia, we sailed into Moreton Bay before Brisbane. As we entered the bay, to the right, all along the shore enclosed with a coral reef, stood a row of curiously shaped hills, two of them looked like flattened cakes, the third was a tall, sharply cut rocky peak. These hills which lie quite apart are in connection with the so called «great barrier reef» which stretches from the eastern coast of Australia to its northern extremity.

About half way across the bay, white jelly-fish swarmed in unusual numbers over the water: the greyish water of the bay looked as if crowds of snowballs had been thrown into it. Our boat steamed slowly along the route marked by posts: and in the afternoon, after sailing slowly for 25 sea miles, we anchored at Pinken. After half an hour's ride by train, we arrived at Brisbane.

The houses of the town of Brisbane, which according to the Census of 1903 contains 124,000 inhabitants, are mostly built of stone: the streets are broad and clean. After a drive round the town I went to the Gresham Hotel to take tea. After tea, I handed over a few cards and letters to the office, to be posted: as I left the office, the proprietor hastened after me and very courteously took me to the large writing room, where I could do my correspondence in comfort. As I approached one of the writing tables, my attention was riveted by a pile of postcards with red white and green stripes painted over them.

«Where did you get this tricolour»? I asked. «These are the national colours of my native country», he said.

«So you are a Hungarian»? I inquired: well we can continue in Hungarian... «Welcome to my home» he answered... Mr. Tudor is the proprietor of two of the leading hotels in Brisbane: and, as we can read on his postcards, his motto is «Isten hozta» (Welcome!)... God's blessing on the worthy Hungarian who is doing honest work far from his native soil and remains loyal to the tricolour.

We left the harbour of Brisbane on the 17th, at daybreak. The same evening we had our last view of the shores of Australia stretching northwestwards. On the 20th, the island of Rossel, then that of Adele rose to view. On the 21st floating trunks of trees heralded the approach of dry land: and on the 22nd we steamed on northwards through a double line of islands as through a channel. Of the two main islands of the German Bismarck Archipelago, Neu-Mecklenburg (formerly New Ireland) stretching from the N. W. to the S. E. was on the right, Neu-Pommern (formerly New Britain) stretching from the N. to the S. W. was on the left hand.

The mountain range of the two islands attains a height of 1200 metres in Neu-Mecklenburg: the hills of Neu-Pommern are probably considerably higher. The islands are covered by magnificent primeval underwood: only near the shores, around the scattered homesteads, do we see spots that look like lawns. As I was informed later on, these charming spots are clumps of useless shrubs.

The interior of the two islands is unexplored. The southern half of Neu-Mecklenburg is still inhabited by cannibals: nor has the custom of eating one's enemies entirely gone out of fashion in out-of-the-way spots on the island of Neu-Pommern. Sailing among these islands which are still in a primitive state, we are overwhelmed with curious feelings. How interesting it would be to penetrate to the district inhabited by savages, to take photos etc. In theory the idea is a charming one: but it is an extremely difficult task to traverse the damp, impenetrable, fever-haunted bush country; and besides, it is impossible to find a suitable

interpreter, as the various hostile tribes living in the island do not understand one another's tongues.

I had thought of staying here but, when informed of the difficulties, I gave up my intention, all the more readily as we had arrived just in the rainy season of malaria.*

Herbertshöhe. Simpsonhafen. Excursions from Simpsonhafen. The Tawurwur volcano.

On January 22, we anchored in front of Herbertshöhe, in the north of the Island of Neu-Pommern. The warship «Condor» anchored in the harbour fired a salute of 7 guns in honour of the German flag.

Herbertshöhe is the residence of the Governor entrusted with the control of the Bismarck group of islands and of the German Protectorate of New Guinea. As soon as the anchor grounded, officials came in a motor boat, while the bare-footed native police clad in coffee-coloured uniforms, with peaked caps on their head, arrived at the ship's side in a row-boat. The brown caps do not suit the natives' heads in the least. In point of feature, they might be compared to the mountaineers of the Fiji Islands: though they are smaller and the lower part of their legs is less developed. Notwithstanding their official capacity, they still wear earrings, necklaces, and a broad plaited band tied tightly

* The islands included under the name of «Bismarck Archipelago» (Neu-Pommern, Neu-Mecklenburg, Neu-Hannover to the N. of the latter, and the French islands lying to the N. between the two main islands etc.) stretch from the Equator southwards to latitude $6^{\circ} 30'$ and between longitudes 141° and 150° . The islands are for the most part volcanic: the igneous line stretches all along the northern shores and is continued on the islands flanking the shores of New Guinea. The climate is warm and damp. From May to November the S. E. trade wind is in force, which after changes to the S.: while from November to May we get the wet N. W. monsoon. According to meteorological observations made at Herbertshöhe (1902—1904), the annual rainfall may be averaged at 2000 millimetres. On the Bismarck Islands about 200 whites are living.

three times round the upper part of their arms. As ornamentation, besides, they are tattooed with a miniature design: while their backs are covered with scars, and lines or spots of red or white paint adorn their foreheads and temples.

The white houses of Herbertshöhe, which lies on a hilly shore, with the green velvety lawns stretching in front of them, peep out from a plantation of palm trees.



On the Bismarck Islands.

After a short stay here, we steamed off to Simpsonshafen (9 sea miles) at the landlocked northern end of the bay. On the way there, to the right we could see two extinct volcanoes (the «mother» and «daughter») and between them the lowlying crater of Tawurwur. The low island situate to the left is also the product of volcanic activity (it sprang into being during the night of Nov. 21, 1878).

At a distance of 7 sea miles from Herbertshöhe

stands the island of Matupi, where, in 1874, a Hamburg firm founded the first trading station in the Bismarck Isles. It was in the same year that the first Wesleyan missionary came to these islands. Beyond the island of Matupi, darkles the curiously shaped crater of the Tawurwur volcano: while on the hither side of the island stand two skerries called the «bee-hive». After sailing 2 sea



Native women from the neighbourhood of Simpsonhafen (Bismarck Islands).

miles further, we arrived at Simpsonhafen. From the harbour we get the two finest views offered by the bay; the steep shores all round are covered with tropical vegetation; to the East the cones of four volcanoes stand in a row; — the one nearest us is an extinct crater some 280 metres high, of the shape of a flattened cake; above it rises the cone-shaped «mother» (685 metres), and beyond, farther to the East, we see the Tawurwur (225 metres),

and still more distant, the cone-shaped «daughter». Simpsonhafen, inhabited by whites, lies on a green stretch of meadow-land extending from the harbour to the first crater. Here we find the post-office, the building of the Norddeutscher Lloyd, and a very well managed small hotel. Beyond the inhabited part, a palm plantation for several kilometres covers the sea shore.



On its eastern side, the Tawurwur crater develops into a black lava crater of the shape of a perfect cone, which came into being on the edge of the older crater (Bismarek Islands).

The native inhabitants, in their original costumes, with their closely cropped hair, presented an unusual sight.

After dinner (lunch) I walked to the island of Matupi, 4 kilometres distant. A wooden bridge crosses to this island: and a Chinese trader living in the vicinity of the bridge placed at my disposal a boat, in which we rowed on towards the volcano of Tawurwur, situate some 2 kilo-

metres away, on the opposite shore of the bay. The worthy Chinese spoke English: his knowledge of German was confined to «Donnerwetter», — an expression in the use of which he was not more sparing than the German inhabitants.

At the foot of Tawurwur, at the spot where boats land, from the side of the lava shore a strongly sulphuri-



Native house on the island of Matupi (Bismarck Islands) decorated with two or three cupoias.

ferous warm spring bubbles forth. On the way to the crater, for about half an hour we walk through lofty underwood: as soon as we emerge from the latter, we ascend through a ravine leading from the crater. Near the crater, spots reeking with sulphurous fumes warn us of the proximity of the volcanic activity. Past a bend we arrive at a large fallen-in crater on the southern side (towards Matupi). The large crater ascends rapidly from

the S. to the N. W. (226 metres): here it is covered with yellow flowers of sulphur. At the eastern bend, the large crater develops into a second crater of the shape of a perfect cone, which came into being on the eastern edge of the older crater. The cone of the more recent crater has been built of fragments of hard, heavy, shining lava: if is round in shape. In places the sides of the new crater are extremely warm: and on the southern exterior side sulphur fumes are bursting forth. From the top a splendid view of the bay is to be had.

The double «skerry» called the «beehive» (Dawasia) lying 2 sea miles from Simpsonhafen, is also worth a visit. On the sides of the fantastically shaped eyots, palm trees are growing (the larger island of the two is 70 metres high): the coral life in the shallow water all round is remarkable varied, both in colour and shape. Proceeding 2 sea miles farther on, we come to the island Vulcan which sprang into being on Nov. 21, 1878. Despite its youth, this island is covered by vegetation (for the most part bushes): while round the shores the coral rocks are in places piled up in large heaps. Not till we have set foot on the island can we imagine that the volcanic world too has had any part in the work of creation: for all round the sands are covered with a thick layer of yellowish white or dark steely pumice stones of the size of a man's fist. These stones must originally have been much larger; for the constant wear of the flood and ebb tides has polished them down considerably. I found many stones of the kind mixed with deposits of coral and lime-stone.

The southern corner of the island is occupied by a lake very rich in sulphur.

On my way back from Vulcan island, I made another excursion to the island of Matupi, which I had visited the day before, to see the natives inhabiting it. About 1000 natives live on Matupi. The native houses are enclosed by bamboo fences: and the dwellings lighted by

the door only are ornamented by the roof with its two or three cupolas.

In the courtyards we generally see hanging on the trees wickerwork baskets of bamboo, in the manufacture of which the brown-skinned natives of the Bismarck Islands are adepts. As soon as they heard that I was looking for native work, the natives produced the articles intended for



Natives with painted wooden carvings used in dancing and at religious rites: in the back ground, two bamboo baskets hanging on the trees.

sale, — arrows, bamboo harpoons, wooden carvings painted red, white and yellow, used in dancing, etc. I also obtained a club provided with two stone rings. At first sight I had gained a very poor impression of the natives of the Bismarck Islands: but this excursion changed my views. Of the five black-skinned oarsmen who had accompanied me two could speak pidgin English: and so I could make myself understood. Notwithstanding the scorching sun, my

men rowed famously: when we landed, I praised their efforts and presented them with tobacco and comestibles. They were quite able to appreciate my conduct: when I was intending to make purchases, they warned me to give so much, and no more, — so with their help I was able to secure the articles considerably cheaper.*

On January 23, in the evening, we sailed out from Simpsonhafen: the Governor as well as several other official personages, came with us as far as Herbertshöhe. In the well-ventilated smoking-room of the «Prinz Sigismund», Lambeck — as we had jokingly christened the pigtailed Chinese waiter — had all he could do to satisfy the demands for iced barrel beer. Stopping at Herbertshöhe, we were treated to a serenade by the band of the warship «Condor». When we started, everybody on the ship was in high spirits, — and it was in this temper that we parted from our «Donnerwetter» friends of the Bismarck Isles!

From Simpsonhafen to Friedrich Wilhelms- hafen (German New Guinea).

(427 sea miles.)

On January 24, in the morning, at the northern bend of Neu-Pommern, the cone of the Vater volcano (2300 metres), which is even now occasionally active, rose to view: then we sailed on in the vicinity of the French Islands, a group of islands of volcanic character situate between latitudes 4 and 5 S., passing from W. to E. along the shores of three island volcanoes. In the early hours of the 25th, we were already off the coast of German New Guinea.

The bay of Friedrich Wilhelmshafen is enclosed by numerous small islands. The panorama presented on arrival is not so effective as at Simpsonhafen: but the num-

* Considering the excellent character of the soil, the cheap wages, with the natives properly controlled and educated, the Bismarck Islands offer a splendid prospect for planters.

bers of green islands render charming the primitive district submitted to the advance of modern culture.*

In German New Guinea the only cultivated territory is in the hands of the German New Guinea Society. At first attempts were made to grow tobacco : at present coconuts and caoutchouc (*ficus elastica* and *Castilloa*) are produced.

Friedrich Wilhelmshafen lies on the bay of Astrole,



Native (Papuan) women from the neighbourhood of Friedrich Wilhelmshafen (New Guinea).

in the northern half of the Shering peninsula. Here the ships land at the quay : opposite, beside the harbour warehouse,

* German New Guinea lies between longitudes 141 and 148 E. To the West, it adjoins Dutch New Guinea, to the South, British New Guinea. With the islands adjacent, it comprises an area of about 181, 650 s. q. kilom.

The shores are enclosed by a coral reef and numerous small islands. Of the known hills, the loftiest attains a height of 1506 metres. The natives inhabiting the Bismarck Isles and New Guinea are included under

stand the offices of the New Guinea Society. Beyond, amid rows of palms, gleam the white dwelling-houses of the clerks and officials.

Eager to help in the work of loading and unloading, the natives swarmed over the quay in large crowds. While the coal was being loaded, and in the granaries, one of the German «task-masters» several times lashed the naked



Native (Napan) men from the neighbourhood of Friedrich
Wilhelmshafen (New Guinea).

natives with his whip. This method of keeping order I had not yet remarked anywhere in the island world.

the general name of Papuans: this name is not a suitable one, for the inhabitants of the main and subsidiary islands belong to entirely different tribes. According to Dr. Hollring, on the shores of New Guinea, at average intervals of 8 miles, we find natives using an entirely different dialect or tongue, and for this reason, in default of a suitable interpreter, it is hardly possible to undertake a long journey of exploration, — so the interior of the island is still unknown.

In point of decoration of the body, the New Guineans surpass the inhabitants of the Bismarck Islands: one might say, they adorn their persons in a stylish fashion. Instead of a cloth, they bind a ribbon or a girdle about a span broad about their middles: on the upper part of their arms, as in the Bismarck Islands, they wear plaited bracelets, but the most highly prized of their ornaments is the double



Native boat, painted and carved, from the neighbourhood of Friedrich Wilhelmshafen (New Guinea).

boar-tusk worn round their necks, and a wreath of dog's teeth bound round their heads above the forehead. Besides they wear ear-rings and bones threaded through the cartilages of their noses. The upper parts of their bodies are tattooed and provided with scars. Their faces are decorated with spots and lines of white, red, and black paint.

The Lloyd C^o placed a benzine motor boat at the disposal of the passengers: with it we went for an excursion.

sion, accompanied by the captain and the worthy missionary residing on the adjacent island of Siar. We had an enjoyable trip among the islands overgrown with mangrove bushes and colofolum trees with foliage similar to that of the mangrove. The luxuriant vegetation, the coral life in the shallow spots, and the unusually shaped native boats kept our attention constantly riveted. The outriggered canoes of



Dwelling-houses on the island of Siar, near Friedrich Wilhelmshafen (New Guinea).

the natives have carved projections in the bows and at the stern: the sides of the craft are decorated with beautifully carved planks. The oars are generally taken by the women: and in other respects too the inhabitants of New Guinea make the women do all the hard work.

On the island of Siar, we paid a visit to the Rhine missionary station established in 1889. The sympathetic missionary took us round the station. In the pile dwellings

of the natives we found the inhabitants: the children and women were for the most part sitting about in the terrace-like entrances to the houses. As we approached they offered for sale the carved sticks used as charms and in dancing, double drums of cylindrical shape, arrows etc.: but they were not inclined to part with the neck and forehead ornaments, even for the large sums of money offered. I was only able to secure one fair specimen of a double «tusk» necklet. From the island of Siar we proceeded to the more distant bush district of the main island: here we visited a native family living in a remote spot. We found an entirely primitive state of things in the little cottage lying in the middle of a banana plantation.

As in the moist districts of the Fiji Islands, the bush is overgrown with a labyrinth of climbing and parasite plants: the atmosphere is moist like the air inside a hot-house. We several times heard the tones of some cockatoos and a bird singing beautiful melodies, — but what is this in New Guinea, where the feathered tribe is represented by over 900 native species?

Returning from the excursion, we hastened to the offices of the Guinea C^o, to buy stuffed birds of paradise. This is the article most in demand among passengers: it is purchased, sometimes for museums, sometimes as an ornament for hats.*

The gentlemen employed in the offices simply overwhelmed us with kindness: one could see how glad they were to see Europeans. The lot of a small white colony shut out from month to month from the outside world and condemned to live in the neighbourhood of cannibals, is not an enviable one. The spot, which is in other respects

* On the island of New Guinea, besides the birds of paradise (represented by 8 species), there are a legion of smaller birds with ornamental tails of one or more feathers. Even one variety of Kingfisher (*todirhampus Pealei*) has joined the ranks of long-tailed birds. It seems as if they were all endeavouring to become birds of paradise.

charming, is very malarial: everybody indulges in quinine, and yet most new settlers have to get over a slight attack of malaria. Much worse than the latter is the «black water fever» (Schwarzwasser-Fieber), which often ends fatally.

In the afternoon the inhabitants of Friedrich Wilhelmshafen came on board the ship to pay us a visit. Notwithstanding the iced beer, the company soon warmed up. When we started, 16 officials of the New Guinea Society, in white clothes, were waving to us from the shore, while beside them hundreds of black-skinned savages were uttering wild whoops. Had these black men the slightest inkling of organisation, a night of this kind, with the white men sleeping heavily from the effects of iced beer, could very easily be fatal to the latter race. The last attempt of the kind was discovered in 1904: and the ringleaders of the conspiracy were executed.

From Friedrich Wilhelmshafen to Manila the Capital of the Philippine Islands.

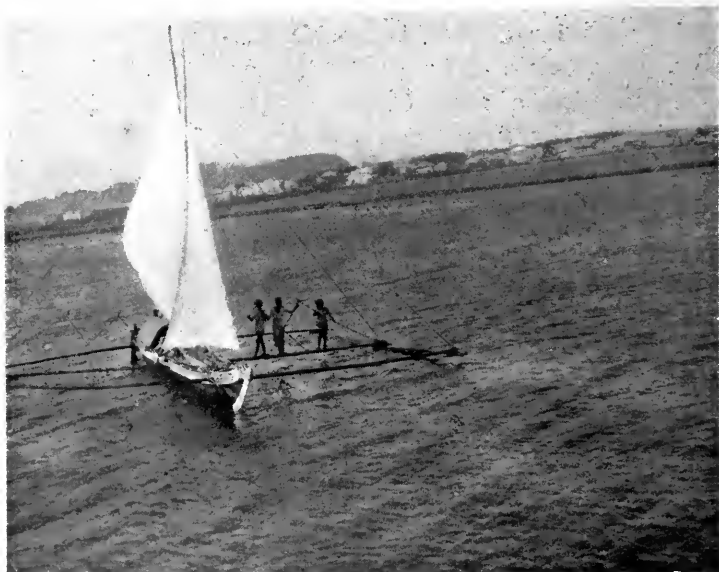
(2026 sea miles.)

On January 26, just before day-break, we passed Vulcan Island, rising 5000 feet out of the sea (latitude 4° S.: longitude 145° E.); and towards evening we sailed near a coral island 7 miles long, which is private property. At the present moment Vulcan Island is only smoking, but is not active. The coral island planted with palms is the property of a white man and is inhabited by a white overseer and black workmen. The signal given by our ship was replied to by a single lamp. Traders only visit the island during the season for exporting «kopra» (dried cocoa-nut chips): otherwise it is entirely shut off from the outside world. The white man who lived here before was done to death by the natives: as soon as they heard that a warship was to be sent to punish the criminals, the 150 guilty men took

boat to leave the island, but fate overtook them;— a storm arose and the boats, natives and all, perished in the sea.

On January 27, the staff of officers of the ship gave a banquet in honour of the German Emperor's fifty-first birthday: the Lloyd Co. supplied the champagne. On the same day we crossed the Equator.

We arrived at the Philippine Islands on January 31. First we passed the island of Samar on our left, then sailed along



Sailing boat with double outriggers (Philippine Islands).

the southern shore of the large island of Luzon, going westwards. Near to the southern corner of Luzon, the cone of the Bulusan volcano (4000 feet) rises prominent in a mountainous district overgrown with bush. In the afternoon we steamed past the Mayan volcano (8970 feet), which with its cone-shaped summit regularly formed on all sides, stands on flat ground. From here, all along the southern coast of Luzon, small islands follow each other in quick succession.

The boat glides as calmly over the tract of water between the islands as if she were travelling over the smooth surface of a lake. With few exceptions, the islands are covered by dense primeval forests: near the shore, in the vicinity of the villages, there are traces of culture too. In every village we see the stone memorials of the worship of the Spaniards, — the Catholic churches.

On February 1., in the morning, in the Bay of Manila 28 sea miles long, the sea was swarming with tiny steamboats plying between the islands, with native craft, and sailing boats. The boats of the natives are generally provided with outriggers on both sides: in a strong wind, in boats of this kind two or three men stand on the weatherward outrigger, and then, despite the comparatively large sails, the craft is practically safe against upsetting. In the larger boats, the oarsmen stand up when they dip the oars in the water, give the craft a swing and then sit down again. A boat being rowed in this manner from a distance looks like a Roman galley in the pictures.

We reached the harbour of Manila on February 1, at 11. a. m.

CHAPTER XII.

THE PHILIPPINE ISLANDS.

General description.

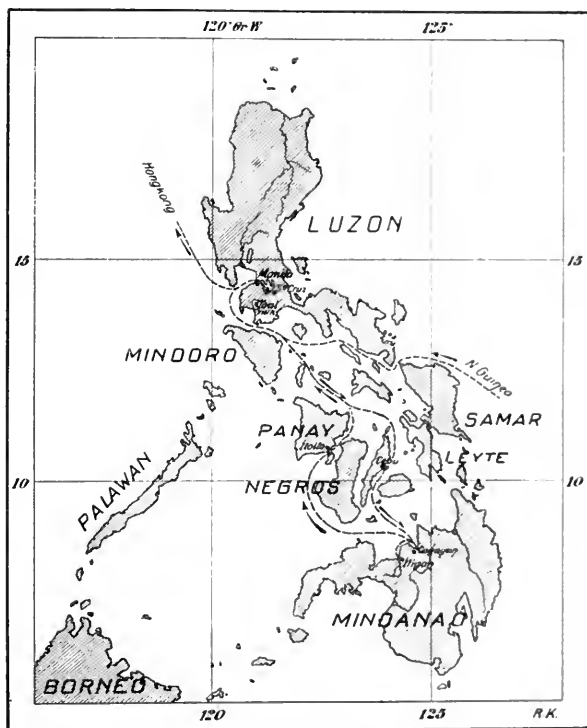
In 1895, the Philippine Islands, which since 1564 had been under Spanish suzerainty, passed into the hands of the U. S. A. The group which consists of 1583 islands marked by name on the maps, lies between latitudes $4^{\circ} 40'$ and $21^{\circ} 10' N.$, and longitudes $116^{\circ} 40'$ and $126^{\circ} 34' E.$, — i. e. it extends over a length of 1010 sea miles from N. to S., and a breadth of 594 sea miles from E. to W.*

According to the official Gazetteer, the 1583 islands included in the maps are distributed into groups as follows :

1. The island of Luzon (northernmost)	43,075 sq. miles ;
311 dependent islands --- --- ---	1,160 " "
2. The island of Marinduque --- ---	667 " "
13 dependent islands --- --- ---	14 " "
3. The island of Mindanao --- ---	45,559 " "
258 dependent islands --- --- ---	1,162 " "
4. The island of Mindoro --- --- ---	4,050 " "
26 dependent islands --- --- ---	58 " "
5. The island of Palawan, or Paragua	4,579 " "
135 dependent islands --- --- ---	458 " "
6. The Sulu Islands --- --- ---	520 " "
188 dependent islands --- --- ---	509 " "

* Wallace, in his «Malay Archipelago», includes the Malay Peninsula as far as Tenasserim, to the W. the Nicobar Islands, to the E. the Solomon Islands, and to the N. the Philippines as part of the Malay Archipelago, — owing to the similarity of the fauna. According to his view, the Malay Peninsula must have separated from Asia a comparatively short time ago.

7. The Visayan Islands (including Negros, 4839, Panay, 4752 sq. miles etc.)	23,411 sq. miles :
507 dependent islands --- --- ---	1,891 " "
8. 145 other islands --- --- ---	740 " "
Altogether --- ---	127,853 sq. miles.



The large islands of the Philippine Group.

The majority of the islands are of volcanic origin: of the 50 volcanic hills known, some 20 are more or less active. Volcanic earthquakes are of frequent occurrence in the islands, — the only exception being the rocky island of Paragua, in the western half of the group, stretching from the E. to the S. W. The highest hills are Apo

(10,312 feet: island of Mindanao), Halcon (8865 feet: island of Mindoro), and Mayon (8274 feet: island of Luzon). Hot springs are to be found in several places: and the large islands are provided with networks of well-watered rivers.

On the average — taking the islands situate in the centre — we can distinguish the following three seasons:

1. Dry season, — November to February;
2. Warm season, — April, May, June;
3. Intermediate season, — March, July, August, September.

The months of May, June, July, August and September represent the wet season: the largest rainfall is in September; February and March are the two driest months. From May to October, the prevailing wind is a southwest one; from November to January north winds, and from February to April east winds prevail. July, August, September and October are the season of cyclones.

According to the statement of the official Gazetter of 1902 (based on the Spanish Census of 1887), the population was estimated at 6,975,073: it may be distributed into the following main groups:

1. Negritos, 2. Malaysans, 3. Indonesians, 4. Europeans, 5. half-breeds.

1. The Negritos are regarded as the aboriginal inhabitants. They originated from New Guinea, are small and black, as their name declares. They inhabit the woods of the southern hills, whither the tribes that immigrated later on drove them. Pure Negritos are confined to the island of Mindanao: in other places they have intermarried.

2. For the most part the Malaysans are to be found as a mixture of Negritos, Chinese, Europeans and Indonesians: they are then known by the name of «filippinos». They may be subdivided into three classes, — the groups of Catholic, heathen, and Mahometan Malaysans. In the neighbourhood of Manila and in the more civilised spots, the number of the former may be estimated at 1,500,000.

3. Dark-skinned islanders not belonging to either of the two main classes already mentioned, are called Indonesians. These too inhabit the island of Mindanao: they are of medium build, muscular, with high foreheads, aquiline noses, light brown skins, wiry hair and thick beards.

The Negritos can be divided into 21 tribes: their number is estimated at 250,000. The 47 tribes of Malaysians



Boat with two outriggers from the Lanao Lake District, in the island of Mindanao (Philippines).

comprise 5,699,400 souls: and the 16 tribes of Indonesians, 252,000. Besides, some 56,000 Chinese are living in the islands. The white race is represented by the soldiers, officials, and part of the business world.

Of the 84 subdivisions of the native tribes, 8 may be considered civilised. The Negritos represent the lowest grade of humanity: but the wildest are the Moros.

Among the heathen tribes, slavery is still in fashion.

Apart from the heathens and Mahometans, the predominant form of religion in the islands is the Roman Catholic one.

In the State schools instruction is free of charge. In 1835 public elementary schools, 2633 native and 783 American teachers are employed.

There are 15,000—16,000 U. S. A. troops in the islands, besides native constabulary.

Since the occupation in 1898, the Signal Corps of the United States has established a telephone and telegraph line 9000 miles long, for military purposes, as well as a cable connection 610 sea miles long, for commercial purposes.

The inhabitants are engaged in the cultivation of the soil. The principal products are rice, tobacco, sugar-cane, cocoa-nuts, coffee, flax, maize (Indian corn), indigo, bananas, and other tropical fruits. Pineapples are grown in the Philippines, not so much for the fruit as for the leaves which are manufactured like flax. From the strong fibres of pineapple leaves the cobweb-like textures made by the Filipinos* are prepared.

Manila.

The mixed population of the Capital. The native Filipino: the peaceful, sport-loving soldiers.

On the S. W., the Bay of Manila 28 sea miles long, has been protected against the waves coming from a distance by a long double stone breakwater standing in front of the harbour of Manila, erected since the Americans took possession.

The «Prinz Sigismund» came to anchor in the open roads outside the breakwater. In the protected roadstead inside 15 large ocean vessels were anchored, among them two white transports.

* The civilised population of Malay, European, Malay-Chinese and other breeds with an admixture of Malay blood are called «filipinos» in the Philippine Islands.

The murder of Christians is due to the instigation of the priests (*pandita*). If a Moro desires to bring his life to a glorious conclusion, and to win a high place in the Mahometan paradise, he becomes a «juramentado» (Spanish term), shaves off his eyebrows, begs a blessing from a «pandita», and, armed with his two-edged yataghan-like kris, runs «amuck» and cuts down every Christian that comes



Chief-priest of the Mohammedan Moros living on the island of Mindanao (Philippines).

in his way. In 1903, one fanatical madman of this kind killed 23 women, children and men, on the island of Mindanao.*

* «Juramentados» are to be found among the Moro inhabitants of the islands of Java and Celebes too. As I heard from a fellow-passenger residing in the latter island, family troubles and jealousy may also be the basis of a determination to commit murders *en gros*: and in such cases it is not only Christians that the «juramentado» kills, but everybody who crosses his path.

As it has frequently happened that a «juramentado», riddled with bullets, despite his fatal wounds, has gone on with his murderous task, the popular belief is that a Moro possesses more vital energy than the average man. This power of resistance may be partly explained by religious ecstasy, partly by the fact that the man running «amuck» does not remark his wounds, for from the



Mohammedan temple, from the lake district of Lanao, on the island of Mindanao (Philippines).

moment he determines to begin his murderous attack, (by binding up certain nerves), he is under the effect of such unceasing pain that only a wound that is immediately fatal can put him *hors de combat* at once, while the blow of the bullet is not carried to the brain by the nerves in the same degree as with ordinary men.

It was only on paper that the Spaniards conquered the Moros. Their forts built on the islands of Mindanao

and Jolo (Holo) protected a small territory only. The most abandoned Mahometans live in the lake district of Lanao, 22 miles south from Camp Overton, towards the interior of the island. Here at Dansalan, a village on the shores of the lake, on Jan. 24 of the present year there was a veritable night battle between a hostile tribe living in the vicinity (about $2\frac{1}{2}$ miles away) and the constabulary, which is under the command of military officers. On February 6, in the same district, the superintendent-in-chief of the military road from Camp Vicar to Malaban was murdered, and on the 19th the deputy governor was dangerously wounded. In other places too the life of peaceful citizens is constantly in jeopardy: e. g. since March 3, in the wooded country behind Camp Overton, on three occasions the two-edged «kris» has been at work, killing seven individuals.

On each occasion the American troops and the constabulary* organised on military principles follow on the heels of the assassin, sparing neither money nor lives. Considering that the «datos» (or sultans) of the smaller tribes aid the Americans to capture or overcome the criminals, the military system now initiated will probably restore public order in a few years, when the white settlers will be able to employ the Moros as excellent labourers, willing to work and obedient.

* The Moros make excellent constables: they are obedient, and show a child-like attachment to their officers, — a fact that is readily understood, if we consider that the slaves accustomed to the rough, ruthless treatment of the tyrannical «datos» (chiefs), find absolute salvation in the humane behaviour of the Americans. Naturally the constabulary is not formed of tribes living on the a spot, but of the inhabitants of hostile districts.

From Camp Overton to Camp Keithley.

(22 miles.)

As Camp Overton is one of the headquarters of troops and depots of military supplies in the island of Mindanao, the so-called «transports» under State control put in to the harbour several times a month, bringing fresh meat and other comestibles from Australia. The transport of these supplies southwards from Camp Overton to Camp Keithley is carried out by waggons and beasts of burden. The communication between the two camps is kept up by over 800 horses and mules (more particularly the latter).

On March 31, through the kindness of the commandant of Overton, I started in a mule «four-in-hand» to visit Camp Keithley, or rather the lake district of Lanao in the neighbourhood of the camp.

The military road cut through the primeval forest has to be constantly repaired, owing to the frequent rains. The work is done by peacefully-inclined Moros, besides whom elements ever on the watch for an opportunity to murder frequent the road. Having regard to this fact, passengers and coachmen wear large revolvers round their waists, reminding us of a journey in the Middle Ages.

Starting from Camp Overton, for the first half mile the cuttings at the sides of the road show coral up to a height of a few hundred feet. Then, on the continuously ascending road, from the crumbled red clay pieces of lava stand out prominent.

The gigantic trees that stand in scattered array in the primeval forest are overgrown with creepers that reach right up to the crown: while parasites swarm on the branches.

The life in the varied bush that fills the spaces between the primeval trees, we have no chance of observing, for in the thicket impenetrable even to the eye we catch glimpses only of parrots, wild fowl, or wild doves which

settle on the highest trees, or of the common hornbill (hydrocorax). In the smaller valleys where reed-grass is growing, the myriads of crickets or locusts are preyed on by carrion crows.

A superb piece of scenery on this road is that offered by the fall of the Agus brook, $3\frac{1}{2}$ miles out from Camp Overton. This brook is the overflow of Lake Lanao. A



The fall of the Agus brook, $3\frac{1}{2}$ miles from Camp Overton, on the island of Mindanao (Philippines).

carriage road leads from the main road to the waterfall about $\frac{1}{2}$ mile distant. The abundant water of the brook which rushes suddenly and precipitously out of the primeval forest, finds bottom in a defile 285 feet deep. The rocky walls of the defile are covered from top to bottom with fresh green small-leaved bryony. The waterfall is itself a surprising freak of Nature: and the ravine, with its ornamentation of bryony, is remarkably beautiful!

Nine and a half miles from Overton, the road passes the camp of a company of Filipino troops. About 3 miles before reaching Camp Keithley, we find the encampment of the engineers controlling the work of keeping the road in repair. Beyond, we pass through a district inhabited by Moro agriculturists, and arrive at Camp Keithley situated 2500 feet above the level of the sea.

The Lanao Lake district near Camp Keithley.

Dansalan. Back to Camp Overton.

In Camp Keithley a regiment of infantry and a battery of artillery are stationed: below Keithley stretches Lake Lanao, at a height of 2300 feet. This lake, which is 22 miles long from N. E. to S. W., and 15 miles broad, is enclosed by hilly shores and low-lying mountain ridges. The lava-boulders (brought there by the water) which peep forth from the shores are the memorials of the volcanic origin of the district. Owing to the hostility of the Moro tribes, the neighbourhood of the lake has not yet been explored. The village of Madaja lying just below Keithley, on the eastern shore of the lake, and the village of Bacalaod on the western shore, is inhabited by friendly Mohammedans, or rather by Americophile «datos», — for it is on the latter that questions of war or peace depend. The village of Dansalan adjoins Madaja, and it was there that I took up quarters, in order to be within touch of the Moros. In default of a hotel, I put up at the house of the intelligent owner of one of the saloon bars.

The most hostile of the Moros dwell $2\frac{1}{2}$ miles south of Dansalan: on Jan. 24 of the present year, this tribe delivered a night attack against the Moro Constabulary (inhabitants of another district) stationed on the hill above Dansalan. It is said that over 1000 shots were fired on

both sides. That comparatively few casualties occurred, despite the short distance separating the forces (100 paces), must be attributed to the darkness and to the fact that the Moros are not prize shots. Lately, to avoid night attacks, the vicinity of barracks and outposts has been lighted by brilliantly-burning petroleum lamps.

On the day of my arrival, two prisoners chained



Moro Constabulary (in their midst Moro prisoners), from the Lanao Lake district, in the island of Mindanao.

together attacked one of the guard: the bare-footed son of Mars, who was wearing a military «mundir», did not take the matter lightly, and despatched the two murderers without more ado into the Mahometan paradise. But that was not the end of the matter: for, as the two criminals belonged to the neighbouring hostile tribe, the latter prepared to make a fresh night attack.

The plan of campaign was divulged to the military

commander by the Americophile «datos»: and the former sent a company of infantry to defend Dansalan. When evening falls, even in ordinary circumstances everybody wears a revolver in the few places inhabited by whites: but on this occasion the appearance of Dansalan was more warlike than usual. The pelting rain would have favoured the attacking party: but they seem to have heard of the preparations and to have put off their plans for a more favourable occasion.

I would gladly have witnessed an affray by day: but in night warfare the wooden houses stand just as much risk of being pierced by friendly as by hostile bullets, and not even a good photo is offered as compensation for the risk run. So we were not at all sorry that the «fun» was postponed. One friendly Moro did however succeed in finding an enemy, whose head he cut off: and to prove his deed, nailed up the proscribed criminal's head on the side of the road.*

On April 1, in the evening, three gun shots were heard, coming from the direction of the lake-shore. The revolvered visitors to the bar, smiling as if there was some joke in store, hurried off to the spot whence the sound of firing had proceeded. The guard stationed at the landing-place had fired at a native boat which, despite the prohibition to do so, was attempting to land in the dark, with his Winchester, which was loaded with shot. It is almost impossible that he should have missed aim with a shot gun: yet no exclamation of pain was heard.

The hostile party, in all probability, were after firearms: and, had the sentinel not been quick-eyed, they

* It has frequently happened that friendly Mohammedans have employed this method of accounting for the scalps of their adversaries. It is in vain that the American authorities endeavour to make them understand that this is not human: the comprehension of the Moros living in the midst of continuous wild warfare is not ripe enough yet to grasp this point.

would have cut him down and stolen the arms of the guard.*

Now let us look at Dansalan by day. Three saloon bars, five Japanese Geisha-houses, a few Chinese and Indian shops, — that is what Dansalan is. At the beginning of the month, when pay is distributed, the men stand drinks all round in the saloons. The three bars in a few



Amerigo-philé «dato» (chief), from the Lanao Lake district (Philippines).

days dispose of the hardly-earned money. The Moro constables, who in everything imitate the whites, do not like to be outdone by their masters. On several occasions I saw them come in troops for whisky: and on being asked

* In Moro districts, «shot» Winchesters are used only by solitary sentinels exposed to great danger. With them they can disarm lurking foes with greater ease: and there are no «stray» bullets to jeopardise the safety of the inhabitants of the neighbourhood.

whether they wanted first-or second-class spirits, they all voted for first-class, following the lead of the Americans, who in bars are generous to recklessness.

I imagine the life of the buccaneers (first settlers) in America 30—40 years ago must have been similar — to judge by descriptions — to that which we see today in Dansalan, with the difference that in the latter place there are more well-read and honest individuals.



Moro women in the Dansalan market-hall.

On Lake Lanao five steamers ply, under the official control of the Americans. Three of them are Spanish bequests: the Moros sank them, but the Americans raised them to the surface and put them again into a serviceable state. Besides the steamers, the lake incessantly swarms with the long sailing boats of the natives, particularly on market-days, i. e. on 'Thursdays and Sundays. On the two market-days referred to (April 2 and 5) hundreds of

native boats put in at Dansalan. The shore of the lake was thronged with Moros arriving in their dresses of coloured striped cloth, for the most part men, only elderly women putting in an appearance. The men either wear a light turban, or bind their hair in a knot; and then, owing to their completely hairless faces, only the most practised local eye can distinguish them from the women. This female way of wearing the hair must have been the cause of my



Moro men, from the Lanao Lake district.

finding their faces sympathetic. As recently the carrying of arms has been prohibited, only the Americo-phile «datos» appeared with revolvers or rifles: besides, they wear straps bound crosswise over their shoulders, and are provided with letters of recommendation by the military commander, which they produce at once when they make your acquaintance. Besides articles of food, they offered copper goods and fabrics of their own manufacture for sale. In comparison

with the oldest products of the kind, the copper goods show a certain decline, — as indeed it may be said that the whole Moro race is degrading.

From Dansalan I visited the Moro villages of Madaja, adjoining Dansalan on the Keithley side, and Bacalaod on the northern shore of the lake. In both places I found the youth quite friendly: they follow passengers and are only too willing to offer information in their Anglo-Spanish jabber. The same is by no means the case with the older people: while the women folk and the small fry seek refuge in their dwellings, on the approach of a white man.

The road connecting Camp Overton with Camp Keithley is continued from the S. W. shore of the lake to Malaban, on the southern coast of the island of Mindanao: this part of the journey over a long steep slope cannot be performed except on foot or on horseback, and as with my stiffened knee I could not undertake climbing, I returned to Overton the same way as I had come.

From Camp Overton, viâ the towns of Cagayan and Iloilo, back to Manila.

(630 sea miles.)

Good Friday in Manila.

I started back from Camp Overton to Manila during the night of April 7, by the S. S. «Brutus», of 1100 tons' burthen, which runs between the islands. On the 8th, we stopped at Cagayan: after sailing past a few smaller islands, on the morning of the 9th, we were proceeding northwards along the western bush-grown coast of the island of Negros (4839 sq. miles in area). The largest quantity of sugar-cane produced in the Philippines is at present produced in the island of Negros. In the afternoon we anchored off Iloilo, the Capital of the Island of Panay (4752 sq. miles), on its eastern shore, between the said

island, to the West, and the little island of Guimara which lies close to Negros.

On the peninsular promontory before Iloilo, we see a small fort, a relic of the days of Spanish rule: beyond, where the river Iloilo flows into the sea, stands the Capital of the fertile island. On the large river, for a distance of some few hundred yards from the estuary vessels of medium draught can anchor: when we arrived, three steamers were anchored in the heart of the town, while large butterfly-winged native boats and barques plied incessantly to and fro between the two islands. On the banks of the river houses and a railway are being built: the «Brutus» was loaded from top to bottom with sleepers for the new railway track.

Iloilo, a town which now numbers 19,054 inhabitants, was almost completely burned down by insurgents in 1899: since then it has been re-built, — a fact that has not been at all to its disadvantage. With its wide streets and comfortable houses it is quite a pleasant town. Here too, as everywhere in this island-group, there are plenty of Chinese tradesmen: but the more important businesses are in the hands of white men.

Iloilo is surrounded for several miles by a flat rice-producing country: here and there cocoa-nut trees too are grown. In the villages in the vicinity here too we find stone Catholic churches dating from the days of Spanish dominion; while the native houses are built of bambos, as in the islands of Luzon, Cebu, and Mindanao.

Our boat left Iloilo on the 11th, at noon: after a calm sail among islands, we arrived before the harbour of Manila on the 13th, at dawn. On the lovely, moonlit nights, we generally went late to bed: as I could see, the spots studded with tiny islands and rocks are well provided with lighthouses, without whose help on a dark night, very few ships would be able to steer a sure course through the innumerable small islands.

In the bay before Manila, 12 steamers were anchored: some of them had arrived the same morning and were waiting for the medical examination. In the protected bay too I saw 10 large ships: while on the river Pasig were ranged in a long row inter-island steamers, sailing boats and tugs.

The Catholic inhabitants of the Philippine Islands keep the church feasts very strictly: on Good Friday, the Filipinos, almost without exception, wore dark clothes. The veil-like dress of the women, in black is quite stylish: they all looked like so many nuns. It was evident that the transparent fabric was originally made for such a purpose, and that its use on ordinary days must have been a later development. In the religious procession in the afternoon, allegorical figures were carried in ornamental palanquins: the commonest allegorical images were wax figures of women in black dresses, on silver-mounted stands. Naturally the procession was followed by the crowd, with hats off. As a matter of decorum, spectators too should do the same, — but a few irreligious Americans did not seem to quite clear about this elementary rule, for with their hats on they appeared to parade their misbelief. In Catholic countries there is no music as a rule on Good Friday: but the new system has ignored this fact too as far as the restaurants are concerned. By their conduct in this respect, the Yankees not only show a want of tact, but prove that they are not yet masters of the secret of colonial policy.

CHAPTER XIII.

HOMeward BOUND.

Hongkong.

(600 s. m. from Manila.)

Short characterisation of the Chinese.

There is an ordinary service of steamers twice a week between Manila and Hongkong: besides, the passenger steamers running on the line mentioned stop at both places. Our boat left Manila on April 18, at noon: on the 21st towards evening, we were approaching the islands skirting the shores of Asia, and Chinese fishing-boats too heralded the proximity of dry land. With their double sails stretched by parallel poles of bamboo, the latter looked like large kites.

After passing several tiny islands, we proceeded in a bay stretching from S. E. to N. W., between the island of Hongkong and the peninsula of Kau Lung, towards our destination. Here and there on the shores, the lamps of groups of houses and of fortifications glimmered: while on the waters of the bay, the masthead lights of sailing boats were rocking. In the bay of Hongkong the illumination effect was perfect, before the inner (Victoria) town, hundreds of winged craft were riding at anchor, then the lake-like bay between the Victoria and Kau Lung towns (on the peninsula of the same name) swarmed with craft of all kind. The innumerable lights of the ships and boats and the shore were interrupted only here and there by the

vertical shadows cast by the funnels of the large steamers: while on the steep hill forming the background of Victoria, the island town was bathed in the twinkling light of lamps. Above the town built up to a height of about 600 feet on the steep hill-side, there was a long line of darkness to be followed by a fresh row of stars representing the lights of the large Victoria Peak Hotel quite close to the summit and of the barracks and other dwellinghouses.

When entering the bay I had regretted that we arrived at night: but the evening picture quite made up for the loss.*

Hongkong being a free port, landing is not accompanied by ceremonies, — there is no medical or customs examination. Had we arrived early, we should have been met by the small steam launches of the large hotels: but as we were late, we had to content ourselves with the sampans steered by Chinese women. After landing, we

* The island of Hongkong, which lies in the S. E. half of the Chinese Empire, between latitudes $22^{\circ} 9'$ and $22^{\circ} 17'$ N. and longitudes $114^{\circ} 5'$ and $114^{\circ} 8'$, ever since the treaty of Nanking in 1842, has been a British Crown colony. The island is 11 miles long; its width varies between 2—5 miles; and its area is 30 sq. miles. The islands annexed by conventions made between 1860 and 1898 as well as a part of the peninsula of Kau Lung, with an aggregate area of close on 370 sq. miles, are also a Crown colony. In 1841, on the barren island of Hongkong, 4000 natives were living: according to the Census of 1906, the population had risen to 298,564, — of this number 242,001 were living on dry land, 45,582 on the water. The population (including the army, the navy and the merchant service), are all Chinese, with the exception of 9000 Europeans and 5791 Indians (soldiers). In the port, free since 1842, the trade has been continually on the increase: for, while in 1861 1259 steamships left the island, with a tonnage of 658,196, in 1906, the numbers had risen to 22,142 and 11,203,844 respectively. The imports show a proportionate increase. The local trade of the large junks in 1906 show an import of 1,019,507, and an export of 1,023,148 tons. Besides, about 3000 sampans and 300 small tugs ply in the Bay of Hongkong. A good many of the small steamers have licences to carry passengers.

entrust our luggage to the safe keeping of coolies (Chinese porters), who hasten to make us understand that for the 5—6 pieces we must pay a dollar (the dollar in use in the island of Hongkong, in Canton, and in the island of Macao represents about half the value of the American one): we are quite ready to strike a bargain with them.

When we reach the hotel, we find that a third of the price would have been quite enough. Wages are not as high as they should be here. Passengers are carried to their destination in two-wheeled «jinrikishas» or in sedan-chairs suspended on two bamboo poles, I had no inclination to try the former, because I do not like to see harnessed fellow-men running in front of me: but the two stalwart fellows marching along with the sedan-chair affect my feelings of humaneness less, especially if the palanquin contains a beautiful, well-dressed woman, as is often the case in the streets of interesting Hongkong.

The town of Hongkong, or as Englishmen call it, Victoria, consists of palaces and well-built stone houses: but apart from the broad main streets and squares, the town, which is 4 miles long, but in the centre is confined to a breadth of half a mile, and on the skirts of 200—300 yards, offers no opportunities of extending as might be desired, consequently the side streets and those of the Chinese quarter are narrow.

The shops are almost exclusively in the hands of Chinese, who attend so punctually to their customers and are so strict in keeping to the day appointed (even tailors), that their white fellow-men might learn much from them in this respect. But the system of haggling common in Asia everywhere is in fashion here too: we find fixed prices in the bigger shops only, — here the pigtailed Chinese might follow in the steps of their white brethren.

The moment we leave the centre, the rows of public buildings, banks, hotels and palaces, we reach the quarter inhabited by the Chinese. The many-storied stone houses

looking on to the narrow streets, with their fronts ending in a row of box-like balconies, do not represent the Chinese style of building: but the inhabitants have remained true to their traditions, customs and costumes. They live here as everywhere else in the great Chinese Empire. The Chinese, deeply rooted as they are in their customs, are not in the least perturbed by a miniature Tartar, Portuguese, French, or English invasion: they peacefully submit to the foreign rule, for they have never developed the warlike instinct of resistance, — but they do not renounce their customs. I find a delight in such an unmixed representation of any one race: after the half-breed inhabitants of the Philippine Islands, who ape the exterior and the faults of white men, the impression is a doubly powerful one, and, besides, everywhere in the world I learned nothing but respect for the Chinese, for their diligence and keeping of their word, for their readiness and thoughtfulness as servants.*

One of the sights of the street life is the provision market. The cooks at their little tables offer the heavily

* In Hawaii, in the Philippines, in Hongkong, Canton, Macao, in fact, everywhere where any opportunity is offered to the worthy Chinese, we recognise the same type, — a patient and sober man, with the diligence of an ant, and reliable. Chinese tradesmen keep their word: while Chinamen engaged for personal service are thoughtful, careful and trustworthy. On the lines of steamship service touching China and Japan, for the most part Chinese servants are engaged on the steamers: when I boarded a boat of this kind, I felt a certain peace of mind, for I knew that I had no need of repeating anything I had once shown to a pig-tailed Chinese. But to go further still. In the banks of the Hawaiian, Philippine and Hongkong Islands, of Canton and other places, Chinamen are engaged to assist cashiers, owing to their trustworthiness and quickness at calculation. It is worth while watching the speed with which they manipulate the calculating machines consisting of marbles strung on iron sticks. I have heard from expert authorities that they reckon quicker and with more certainty than any European algebraist. This fact shows that all that is required to enable the Chinese to compete with European culture is a change of system.

spiced but tasty dishes on tiny plates. Roast sucking pig is to be had too, roasted to a crackling red hue as desirable.

Both in the streets of Hongkong and in Canton, on several occasions I saw roast sucking pig being carried in a palanquin decorated with coloured paper: by the side of the sucking pig, red and white round cakes were placed. These were being taken to the temple first to receive a



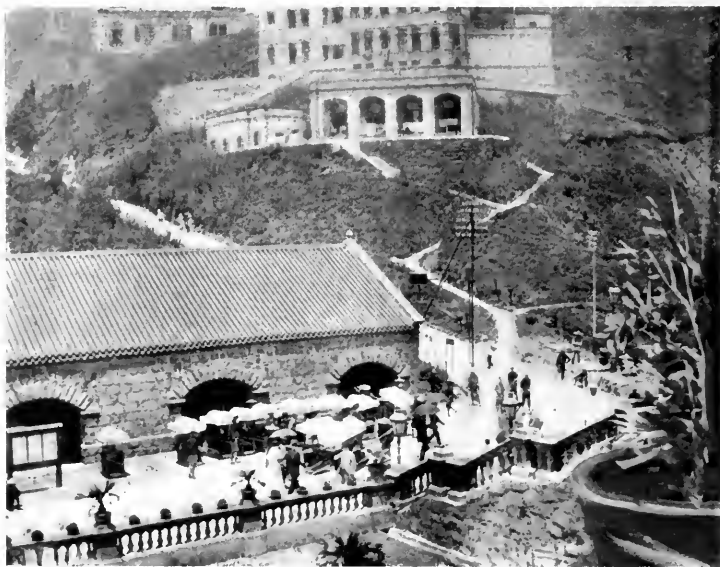
Ornamented roast sucking pig being taken to be blessed (Hongkong).

blessing, and then devoured, — generally in connection with some festive occasion.

In the streets, besides the Chinese policemen, we see stalwart Indian constables too with coloured turbans on their heads. The Indians render service in the maintenance of public order, but they do not interfere with the Chinese atmosphere: with their sharp features, coloured turbans and thin legs, they form a striking spectacle. — one might

almost say an exhibition spectacle, practically desirous of attracting public attention, one which, however, in the midst of the Chinamen with their primitive originality, leaves us quite unmoved.

We get the best view of the town, the bay swarming with ships, and the surrounding islands, from the summit of Mount Victoria (1820 feet). From the hill-side behind



Palaquin «stand», near Victoria Peak Hotel (Hongkong).

Victoria, a funicular railway leads to the Victoria Peak Hotel situate at a height of 1300 feet. The length of this railway is 4690 feet; its smallest gradient 1 : 25, its steepest, 1 : 2. The whole line offers us a splendid view of the varied panorama of Hongkong. The villas reach up to a height of 500—600 feet; everywhere a varied vegetation covers the side of the hill; one of the large reservoirs supplying the town is also in the neighbourhood of the

railway. At the Victoria Peak Hotel, a row of palanquins is waiting for passengers: two coolies take the palanquin on their shoulders and walk up the remaining 520 feet with only one «breather». The beautiful summer residence of the Governor is quite near to the summit; from the ship-signalling station 1820 feet high we get a view over the sea all round. Below us lies Hongkong; beyond, the bay studded with ships; and, farther still, the endless chain of small islands. Like Hongkong, these islands are elevated rocks: but no trees grow on them; and only Englishmen have planted this charming outpost with them. On the grass-grown smaller islands, as on that of Hongkong, crumbled ferriferous clay forms red spots, which in sunlight colour the picture of the scene.

Another point of vantage is the bay. Looking from the bay swarming with numberless steamers and sailing boats on to the shores of Victoria, we can imagine ourselves to be in the centre of a large arena: it seems as if the numbers of water craft dancing around us had been assembled merely to arrange some impromptu marine spectacle for the rows of boxes of the many-storied stone houses flanking the shore.

And anyone desiring to see the difference between the white and yellow races by evening illumination in Hongkong should make a pilgrimage to the Chinese quarter after supper (dinner), when he will observe that even late at night Chinese craftsmen do not give up work: the coolies are pulling the jinrikishas as quickly as if they were paid, not by time but by speed, while the representative here of the white race, the cultivated conqueror of the world — i. e. of course, only sailors and soldiers, — are lying back in vehicles drawn by fellow-men, reeling in a tipsy condition from one side to the other, bursting into loud, rude guffaws at the sight of a white kinsman, or, if the coolies are not willing to fulfil their every desire, indulging in swearing or even blows. This method of

behaviour prevails everywhere in the world where lowclass white men who have an exaggerated view of their self-importance are to be found, — and is a manifestation of the abnormal condition* of a brain under the effect of drink.

Canton.

(80 s. m. from Hongkong.)

Street life. Chinese system of punishment. Superstition.

The boats of three shipping companies run every day, except Sundays, between Hongkong and Canton: those of the English company are generally overcrowded, — the other companies are Chinese and French respectively. I left Hongkong on the evening of April 22, in the comfortable S. S. «Tung» of the French company. During the voyage, the first-class cabins were shut off from the other classes by closed doors: while in the passage before the cabins a row of 12 carabines and a few swords of primitive shape were standing, — for, on the Chinese shores, particularly in the tributaries of the western river, piracy has not yet been entirely repressed.**

For about 18 sea miles from Hongkong, we passed among islands: and then advanced inland up the river Pearl or Csukiang. Near Canton, several brooks and canals flow into the Pearl, which glides on, wide and gray, amid rice fields. On the embankments separating the latter, fruit trees are grown.

* I have mentioned this fact as a phenomenon only: I do not wish thereby to in any way slight the British system, which always is human and Christian in its treatment of conquered peoples.

** In the case of a steamer, the pirates go on board as passengers, and, in the appointed places, shoot down the captain and any passengers who resist, while the cargo is transferred to junks in waiting. But in the neighbourhood of Hongkong, such procedure is almost obsolete, for the last case of the kind (with a steamer) took place in 1891, 50 sea miles from Hongkong.

On the 23rd, about 6 a. m., from amid the green stretch of rice fields, the walls and pagodas of Canton rose to view, while the river was at every step more thickly studded with «bat-winged» junks, sampans propelled by women and children, torpedo-shaped boats with covered bows, coloured and carved boats, and other local water craft.*



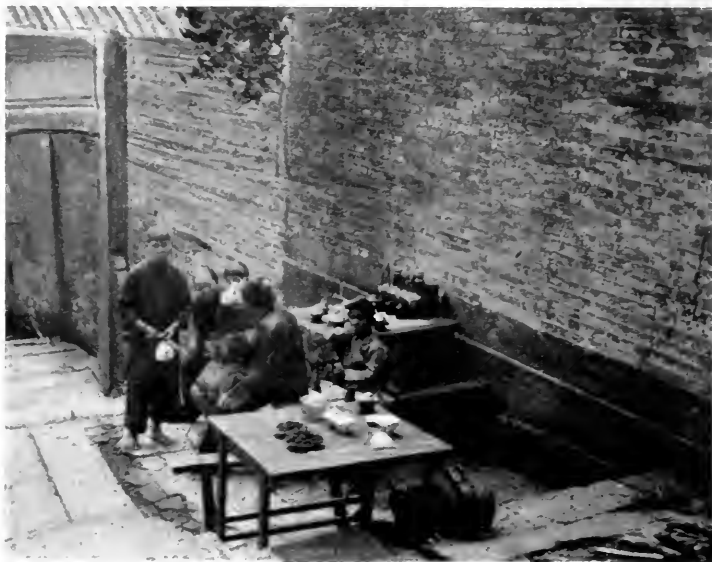
Two Chinese mothers before the Csang Klau temple, in the town of Canton (China).

Besides the boats mentioned, I counted thirty small tugs in the harbour.

* The local passenger traffic of the neighbourhood of Canton is carried by the «sampans». In these floating houses altogether 4000 persons are living in Canton. In the stern, Chinese women manipulate the long steering pole: while in the fore part their children of 7—8 years are rowing. In the centre the boat is covered: the fore part of the covered portion is for the use of passengers, while the back part is the dwelling, where the well-combed mother cooks and sleeps with her

Canton (its population estimated at 2—4 millions) has for a thousand years been one of the largest commercial centres in the world. The interests of its commerce are served by the northern, eastern and western rivers flowing into the Pearl: besides, Canton is connected with the sea by several smaller rivers.

We anchored off the island of Shameen, which



Chinese women drinking tea, near the Kunjam temple (Canton).

stretches for a length of 2850 feet, and in its broadest part is 950 feet in diameter.

family. The inevitable ornament of the sampan is the little altar devoted to the domestic gods and the symbol of sacrifice cut out of strips of paper.

The so-called «flower boats», decorated with carvings and paint in front, are of an evening the resort of well-to-do Chinamen in search of amusement. Besides good food, the passengers are treated to music during an evening excursion on these boats: the prima donna is generally played by the so-called «singing girl», who is accompanied by wind and string instruments of ancestral shape.

Since 1859, one half of this island has been leased to Great Britain, the other half to France. In the snug little European colony, the stone houses built villa-wise, the banks, and a few public buildings, as well as the comfortable hotel of the British quarter, stand in the shade of an avenue of lofty trees.

The northern shore of the island is separated from



Sampans on the canal between the island of Shameen and Canton (China).

the neighbouring Chinese town of Canton by a canal 100 feet in width, which flows into the river Pearl at both ends.

The side of the canal nearest the Chinese town is covered by closely-packed sampans, while on the stretch of water left unoccupied, a thick line of sampans follow one another in quick succession: and the women are such clever «steersmen» that there is never a «block» of traffic.

Passing over the bridge at the northern end of the European territory on to Chinese soil, we may say that «we have crossed from Europe to China», — into the town of Canton founded before the birth of Christ. Here everything is Chinese, the same as it was centuries, perhaps thousands of years, ago: there is nothing to disturb the sameness brought into being amid uniform surroundings.



Bird's eye view of a street in Canton.

On the narrow streets, right and left, shops open: the entrances to the shops (particularly in the quarter inhabited by wealthy merchants) are ornamented by richly gilded and painted artistic carvings, while on the back wall of these narrow but long and deep shops we find the inevitable domestic altar, richly carved and ornamented. There is an endless row of shops dealing in silk, hand embroidery, ivory and wood carvings, greenstone jewellery and other

masterpieces of handicraft. The shopmen are serious-faced, cleanly dressed, pigtailed men.

The majority of the houses are built of brick: but, apart from the side streets, there are no spaces between the houses. Nowhere are the streets wider than a few paces: in some places they are only 4—5 feet across, — and in these narrow thoroughfares tens and hundreds of thousands of people are moving.



Chinese policeman in Canton.

Loads are carried on long bamboo poles, by men either singly or in pairs. Many a time the strong bamboo pole almost breaks in two under the heavy weight: but the two muscular coolies manage to wrestle with it. To warn people coming from the opposite direction, they call out in turns in a voice somewhat louder than that used in ordinary conversation. This is quite enough for Chinamen to get through a Chinese crowd, — a fact which is a proof of their intelligence.

During my two days' sojourn in Canton, I never heard deafening shouts such as I had had to put up with from carriers or hawkers in Italy, Spain, and even in Constantinople. It is only the palanquin-bearing coolies who make a noise of any dimensions, because they move quicker than the ordinary pedestrians: then again, this is done out of respect for the occupants of the palanquin, —



Wong Ming, the official «scourge» of Canton.

especially if a generous «fare» or an important mandarin be inside.

Here and there we see straw-hatted Chinese policemen too, with short batons, *à la anglaise*, and with revolvers too: these bobbies take their duty very seriously, giving the necks of any thieves they may catch a taste of the quadrangular plank, or touching up their backs with 24 blows of the «bamboo». The system of punishment is still

an extremely mediaeval one: the place of execution is public, and it is here that old Wong Ming has for twenty years been practising his trade for 20 Mexican dollars a month (1 Mexican dollar = about 50 cents in U. S. A. currency), — receiving besides half a dollar premium for every head cut off at the first blow. The worthy «scourge» generally does «clean» work with his short, heavy, two-



Stone carvings in the courtyard of the Physicians' temple (Canton).

edged sword: but rumour has it that on occasions the head has remained hanging on a little shred of skin, which, for the sake of the 50 cents, he sawed off. When there are no victims, the long, narrow courtyard is full of earthenware vessels put out to dry, while the bloody traces of the latest execution (two days previously) show red beside the drying pots, or maybe are being absorbed by the same. All this has no effect on the natives accustomed to the

same kind of public punishment. Our attention was called to the stains of blood by the executioner, without paying any heed to the crowd loitering around me. Wong Ming only carries out the commands of the Mandarins, which cannot be appealed against: the mob ruled with an iron hand merely acquiesce in the inevitable.

The street and business life is the chief sight of Canton: in this respect, even in China, very few towns can



The altar in the Csong-su temple (Canton).

compete with it. And indeed, anyone who in Canton can refrain from making purchases, must either be «hard up» or in want of artistic feeling.

The many temples and the few pagodas too deserve a visit: the walls or the cornices of the roofs of some temples are decorated with artistically carved figures, but the ornamentations are for the most part only stucco work, richly gilded. The idols too are mostly wood carvings,

covered with stucco and gilded. The majority of the temples have naturally been raised to Confucius, the founder of the Chinese religion. In the temple of the followers of Buddha, in the gilded row of images of 500 Buddhist disciples we see the statue of Marco Paolo, the great Italian traveller of the XIV. century: no greater compliment could have been paid in China to the Chinophile discoverer.

On the way to inspect the five-storied pagoda with its



«Prophets» in the hall of the Temple of Horrors (Canton).

splendid outlook, I visited the cemetery lying on one of the hill-sides. The well-to-do Chinese bury the members of their families in a building fenced off and occupying several streets: the large coffins thickly covered with black varnish are placed by families in separate, open rooms rented for the purpose, and at the heads of the coffins, from time to time, tea and other articles of consumption are set for the use of the deceased.

Superstition is still rife in Eastern Asia. In the temples, as a rule we can see the «prophets», who practise the crudest mode of prophecy imaginable.

Believers desirous of having their fortune told (almost without exception women) say prayers kneeling before the altar, and while praying shake a collection of sticks provided with Chinese signs contained in a bamboo holder: when the prayers are finished, they take out one of the



Chinese story-teller before the Hannam temple (Canton).

sticks and hurry with it to the prophet, who thrusts into their hands a written prophecy corresponding to the signs of the stick. Prophesying is carried on to the greatest extent in the Temple of Horrors. Here in the shape of a square, a row of side-altars have been raised to the horrible punishments of the other world: and on the covered space among the row of altars the «prophets» are sitting beside a crowd of small tables.

In the Chinese restaurants and other places of amusement flanking the canal, the night life is fairly lively. The most striking features of this same spot are the ground-floor gaming houses, where the game of «odd and even», with four possibilities, is played with bone counters. The banks take 10% of every stake laid, — a proportion that, with the necessary intensity of gambling, must mean a splendid profit. In the company of my handy Chinese guide, on the occasion of an evening excursion, I tasted the favourite dishes of the Mandarins, the swallows' nests brought from the caves of the island of Borneo, shark's fin soup (only the fins of young sharks are employed), and other dishes more nearly corresponding to European taste, — e. g. the chicken boiled with rice, the ham and the brown, salt sauce, tasting of almonds served with the same, is good enough to satisfy even the most delicate palates. The bones of the shark's fins produce a tasteless, gelatine-like transparent dish: and the bird's nests are also a similar gelatine-like stuff.

After supper we were treated to Chinese music: the orchestra of three played on two-stringed, primitive instruments and a zither, and, besides, one of the musicians could play the flute. With this accompaniment two girls sang in turns: apart from their throat tones, the *divas* yodled cleverly enough, and manipulated tin plates and square pieces of wood. I was glad to listen to the first *chanteuse*: but I only stayed out the second series for the sake of decency.

Macao. Back to Hongkong.

(80 s. m. from Canton: 40 s. m. from Macao to Hongkong.)

I started from Canton in the afternoon of the 24th., for a visit to Macao, a Portuguese colony to the S. W. For some time we travelled along the river Pearl, along a country planted with rice. Among the rice fields, at a

distance of several miles from one another, two solitary pagodas stand, their object being to shower blessings on the surrounding fertile fields. The cornices of each floor of the tower-shaped buildings several stories high are thickly overgrown with grass, weeds, and other plants: on the summit of the first tower a tree that seemed of a fairly large size had taken root and already possesses a fine crown.

The Portuguese received Macao, which occupies a peninsula three miles long and about 1 mile broad, from the Emperor of China, for assistance rendered in overcoming Chang-Li-Lao, the dreaded pirate. For a long time the commerce of the Far East was concentrated in Macao (since 1857 Portuguese territory)*: but the moment the British declared Hongkong to be a free port, the ships laden with goods made for the new centre. As a consequence, the system of customs duties had to be given up in Macao too, and free trade had to be introduced: but even so they could not compete with Hongkong, which possessed a deeper and surer haven. Today the part played by Macao as a commercial port is trifling and insignificant compared with Hongkong, which has taken over the leading position.

The northern part of the town of Macao is inhabited by Chinese, the southern part by Europeans. Both quarters extend down to the sea. The steamers anchor along the Chinese shore: while the other side, with its shallower water, swarms with junks.

According to the Census of 1897, Macao was inhabited by 74,627 Chinese, 3898 Portuguese, and 161 persons of various races. The town is distinguished by remarkable cleanliness. In point of building, the European quarter is somewhat antiquated in character: one peculiar

* The Portuguese settled in Macao as far back as the XVI century, paying 500 taels yearly as tribute to the Chinese government until 1848.

feature is that the pipes for draining off rain-water are carved out of stone or stuck together in the shape of bamboo canes. The agreeable little place is ornamented by promenades and gardens: while the five forts standing on elevations at some distance from each other add to the picturesqueness of the scene.

A speciality of Macao is the opium factory, in which, in innumerable cauldrons, the slowly killing brown poison is distilled: another speciality is the rocket factory. There are also a large number of gambling houses.

There is a daily service of boats between Macao and Hongkong: the voyage among the numerous small islands is almost like a trip on the smooth waters of a lake. The islands are of almost the same rocky character as Hongkong: here, too, the red, ferriferous, crumbled clay is to be seen everywhere, but nowhere do trees grow. Formerly these islands were the favourite resort of pirates: today, the increase of traffic and the energetic measures adopted have forced them to seek refuge elsewhere.

On this trip, I saw two species of jelly-fish: one of them looks like two mushrooms growing in two directions on one stalk, — at one end it is the size of a man's fist, at the other it could compete in dimensions with a water melon. Another smaller species of jellyfish too appeared in large numbers: this one possessed fibres like to those of ripe mais.

From Hongkong to Saïgon, the Capital of the French Protectorate of Cochin China. Saïgon. Cholon.

(916 sea miles.)

The passenger ships of the French Messageries Maritimes Steam-ship Co. that run between Marseilles and the ports of Japan, stop at Saïgon too, the Capital of the French Protectorate of Cochin China. In order to visit

Saïgon, I left Honkong by the S. S. «Armand Behic» (6385 tons) belonging to the said Company.

About 10 a. m. on the 29th, we met an ocean current, on the surface of which a yellowish substance of the appearance of tiny spawn was floating. As soon as I had made my preparations for fishing some of it up, we had left the current:* but as I did not observe any vegetable constituent in the floating substance, it must have been an animal product (spawn?).

On the 30th, from morning till afternoon, we sailed S. W. along the hilly eastern coast of Indochina. We anchored at Saïgon, the Capital of Cochin China, on May 1. This town lies on the left bank of the river of the same name. 40 miles from the estuary.**

On the flat territory surrounding Saïgon, rice is grown. The European town lies on the left bank of the river: while the right bank is flanked by a row of native houses. On the river we see large ocean steamers and native boats waiting to take in cargoes of rice. Here too the Chinese craft are propelled by women.

Both in the sharpness of features and in build, the Annamites resemble the Moro inhabitants of the Philippine Islands: and they bind their hair in a similar manner, —

* On May 3 and May 16 we also met ocean currents carrying a similar yellowish substance.

** Indochina, consisting of the provinces of Tonkin, Annam, Cochin China, Cambodia, Laos, Kouang and Tsheuvan, is situate to the E. of Burmah and Siam, stretching in a varying line between latitudes 1° and 9° N. and longitudes 98° and 107° E. Its aggregate area is 666,500 sq. kilometres: and, according to the Census of 1900, its population numbered 15,926,785 souls. Of these aggregates, 59,500 sq. kilometres and 2,499,312 inhabitants (Census of 1897) fall to Cochin China. Of the inhabitants, 1,967,747 are Annamites. The European population, apart from the troops, is represented by 4113 persons: and there are besides, Cambodians, Chinese, Malaysans, and half-breeds. In the whole colony the troops consist of 10,000 Europeans and 15,000 natives under the command of French officers.

in a knot. In the neighbourhood of Saïgon, the jinrikishas (or as they are called here, «pousse-pousse») are drawn by top-knotted Annamites: they are so peaceful, so calm, that we can scarcely conceive that their veins contain blood similar to that of the warlike Moros of Mindanao. But the difference may be explained, 1. by the different nature of their religion, 2. by the more peaceful system of government more careful of local interests (I mean in comparison to the primitive system of government in vogue in the Philippine Islands, which during Spanish rule aimed principally at conversion to Catholicism and did not bother about the economic and social development of the conquered territory).

And indeed France must make enormous sacrifices for her colony of Indo-China: e. g. since 1874 she has made of Saïgon a flourishing town, with such broad, splendidly kept motor-car roads, and public squares decorated with rows of trees and statues, that in this respect it is not behind the mother country. To all this we may add the massive style of stone building, the large cathedral, the public buildings, the Opera erected at a cost of three million francs, the botanic gardens with their excellent small menagerie, and the town park.*

Of the 47,577 inhabitants (Census of 1901) of the Capital, 5475 — including the troops — are French. The broad macadam road towards Cholon leads at first through rows of villas and Annamite houses, then passes rice fields and fallow or barren territory. Everywhere in the flat country we see ancient Annamite tomb-stones.

Cholon is surrounded by kitchen gardens cultivated by Chinese and Annamites. As the pump-wells by the side of the road supply plenty of water, the vegetation in the gardens is very luxuriant. Cholon was founded in 1780

* During the six months' season the Opera receives a subsidy of 120,000 francs from the French Government, which also covers the travelling expenses of the artists.

by the Chinese: in 1901, it contained 63,237 inhabitants, of whom almost half were Chinese. The inhabitants originating from various parts of China have built separate temples for each place of origin: of the small temples, three are perfect specimens of Chinese architecture, unexceptionably proportioned, with their allegorical figures of inlaid coloured china mosaic and their stone carvings.



Ancient Annamite tomb in the vicinity of Saigon (Cochin China).

D. H. P. (Commandeur de la légion d'honneur etc.), an Annamite millionaire living at Cholon, is delighted to show his magnificent palace to travellers. This building contains masterpieces of Tonkin artistic carvings and furniture inlaid with mother-of-pearl.

In the vicinity of Saigon, besides men, horses too assist in the work of drawing carriages: the little ponies are harnessed either to gigs or, in pairs, to large Victorias.

Motors too are quite the fashion: they fly along the splendid roads at a furious pace, in default of regulations. Of an evening the élite of the town take a drive on the so-called «road round the town». On my return from the refreshing drive, with all the variety it had to offer, I sat down on the terrace of the Continental Hotel overlooking the street.



Stone carving from one of the Confucian temples of Cholon (Cochin China).

As supper-time approached, every table was occupied by a select company: for the well-managed café of the Continental Hotel cannot be frequented except by hotel guests, by officers and the «upper ten».

How agreeable, I thought, to be able to sit in the open air at last, drinking my coffee, reading the papers, and observing! I had long not had the opportunity of doing so, for in those parts of the world inhabited by

Englishmen there are no cafés: whereas here, the other two corners of Opera Square were also occupied by cafés, each of them as well frequented as even the Café de Paris in the French Capital!

Having had my fill of the guests of the Continental, I limped off towards the other cafés. I found a terribly mixed crowd; the leaders of society here were drunken soldiers and sailors. Two distinguished guests of one of these cafés started a brawl: the others closed round them, as if it had been a part of the day's work. Later on, the affair was repeated in front of another café: while all the night long, until 3. a. m., nobody in the vicinity of the square could close his eyes, for a few French privates and the tars of an American ship-of-war anchored in the harbour thought fit to sing, — till 2. a. m. in front of the café, and afterwards at the corner of the street. It was not, indeed, singing, but hoarse shouting, — in force similar to the deafening cries of the vegetable-hawkers of Constantinople. Yet no attempt was made to give the heroes of the two republics embracing to the sound of «hip hip hurrah» and of the Marseillaise the rebuke they so justly deserved! . . .

As I reflected through the sleepless night, I came to the conclusion that here too Englishmen are more practical. The «bar»-system, with its closed doors, leaves those outside in peace, and saves travellers the trouble of interfering in questions of public order, — with which after all their only concern in that their sleep is disturbed.

From Saïgon viâ Singapore to Colombo.

(1568 sea miles.)

On the morning of May 2, every inch of our ship was engaged by French officials or military officers returning home. At 6. a. m., the «Armand Behic» turned her back on Saïgon, and, despite the overcrowding of the

boat, we felt a certain relief at the fact that we should not be obliged to spend another sleepless night cudgelling our brains over the public order of the Paris of Cochin China . . .

After passing the rice fields, the river Saïgon flows on to the sea through a flooded, marshy district overgrown with low mangrove bushes and a shrub like the leaf of



Bullock carts in the harbour of Singapore.

the cocoa-nut tree. In this district there are plenty of crocodiles, which I was told could be seen from the boat at times, when the water was low.

The entrance to the river, at its estuary, is protected by fortifications built on two islands on the left bank.

In the morning of the 4th we passed along a bay composed of numerous tiny islands, and came to anchor at Singapore (647 sea miles from Saïgon), at the S. E.

end of the Malay Peninsula. The island of Singapore, which is 27 miles long and 14 miles broad, constitutes a part of the British Strait Settlements, and has been a British Crown Colony since 1867.

In the extensive harbour of the town of Singapore ships from East India, Sumatra, Java and Borneo; as well as those on their way from Europe to Hongkong, China



Fishermen selling shells, in the harbour of Singapore.

and Japan, put in. When we arrive, our attention is riveted exclusively by the harbour life: the town situate on a plain 2 miles away is not visible from the dock of the Messageries Maritimes, owing to a bend of the island. All the more surprising is the sudden view that, from the broad avenue skirting the shore, we get of the inner town with its superb large buildings and ornamental grass-covered squares.

According to the Census of 1901, the free port of Singapore is inhabited by 228,555 souls, — 164,041 Chinese, 36,080 Malaysians and other natives, 17,823 Tamils and other Indians, 3884 whites, and 4120 Africans, Japanese, Persians etc. Scarcely have we begun to make an observation of the features or dress of one race, when our first impressions are obliterated by faces or costumes of a



Natives awaiting the arrival of the train (Ceylon).

second, third, or tenth type. For my part, I like to occupy myself with one race at a time: had I to exercise my powers of observation on such mingled impressions, I would much rather pay a visit to the ethnographical exhibits of the Museum, — and Singapore does possess an excellent little museum.

It is a pleasant drive through the rows of villas at Singapore, over undulating ground, to the botanical gardens

with their network of carriage roads. These gardens deserve to occupy a distinguished place among the botanical gardens of the southern regions.

We left Singapore on May 4, and sailed through Malacca Strait, stretching S. W. between the Malay Peninsula and the island of Sumatra. On the 6th, in the morning, we were off the mountainous northern shores of Sumatra, which were followed by a few smaller islands covered by dense woods: and then we passed out of Malacca Strait into the Indian Ocean.

We arrived at Colombo in the morning of the 9th, with a monsoon that had set in prematurely: till next morning the rain poured in torrents, with a short thunder-storm to vary the monotony, — as is quite usual in the rainy season in these southern regions. I had intended to take the train at once on my arrival, to inspect the ruins of temples in the north of the island: but the trains were not running, for the remarkably heavy rainfall had in some places flooded the lines and in one spot had washed away the embankment. On the 11th, the traffic started again; and I left by the first train on a visit to the town of Candy.

From Colombo to Candy.

(75 miles.)

After the luxuriant flat districts of southern Ceylon, in the north we find plains of less fertility. The districts lying on a level with the sea had been flooded by the tremendous downpour accompanying the cloud-burst: the native houses peeping out from among the palms were also partly under water. In the fresh pools of rainwater round the houses, both the inhabitants and their domestic animals were busily bathing. Here there are far fewer signs of the jackdaws and crows that swarm over Colombo and its environs: though the cunning-eyed jackdaws are just as disreputable bandits here as elsewhere. The mo-

ment a bit of bread flies out of the window of the dining car, a few hungry birds may be heard cawing: the bold-est among them sweeps down on the bread, seizes it and settles on some bush hard by, where he devours his booty in peace.

In the flooded districts the palms too have been watered, — a fact that is not at all agreeable to the cocoa-



Tame elephants bathing in the river Mahaveli (Candy, Ceylon).

nut tree. This is probably the reason why the soil which is under water for a short time every year, during the S. W. monsoon, does not produce so plentiful a crop of cocoa-nuts as the southern part, or the elevated country on the side of Candy. About half way, the plain is succeeded by hilly territory and a mountainous district rising gradually in height. Just before we reach Candy, in the valleys stretching down to a great depth, rice is grown:

the rice fields starting from the valleys, change into terraces that climb several stories high up the slopes of the hills. From the railway which winds past tea, cocoa, and palm plantations, the green row of terraces offer a charming prospect.

In the grey waters of the river Mahaveli which winds along in front of Candy, three elephants were taking their



One of the chief priests of the Dalada Maligava temple (Candy, Ceylon).

daily bath: the effect was as if wild, trunked giants were seen in tropical surroundings, — but it is not so; together with many of their kin kept elsewhere, the animals bathing had already gone through a course of training, and are employed in the festive procession of the Dalada Maligava temple held once a year.

From the XVI to the XIX century, Candy was the Capital of the island of Ceylon: since 1815 it has been

under British supremacy. It contains 26,000 inhabitants: and today it is a health resort and a resort of pilgrims, whose object is a relic (carved of ivory) considered to be a tooth of Buddha's, preserved in a pavilion of the Dalada Maligava temple. As for the construction of the temples of Candy, they offer nothing particular in style: while the standing or prostrate statues of Buddha, carved out of one



Two pretty Singalese girls, members of the Salvation Army.

piece of stone, are exact facsimiles — in point of carving and in colouring and gilding — of the gigantic prostrate Buddha of the Kelani dagoba, 7 miles from Colombo with the difference that this dagoba is more than 1000 years old, whereas the Candy temples and dagobas were built only 200—300 years ago.

Both in point of situation and of the development and grouping of the vegetation, I have never seen a finer

ornamental garden than the botanical gardens of Candy: one part of these gardens is haunted by «flying dogs», thousands of which swarm all over the bamboo bushes.

Candy, which stands on the banks of a little lake in a valley enclosed with hills, is a favourite resort for excursionists from Colombo, both for the scenery of its neighbourhood and for its dry climate which of nights is



A giant tree in the botanical gardens of Candy, overgrown with bryony (Ceylon).

fresh. In the well-managed Queen Hotel on the shore of the lake, the life is quite English in style: everybody «dresses» for dinner: and in the spacious rooms, after dinner we see practically nothing but quietly conversing English people, a sight that is pleasant to look at and refreshing to nerves exhausted by travel and observation.

Back to Europe.

(Colombo to Marseilles, 4996 sea miles.)

I left Colombo on the evening of the 14th, on the same English steamer as had taken me to Australia in December, 1906.

For the first few days, I could not feel at ease in my old floating home. I felt the want of the fellow-travellers with whom, on the way to Australia, I had spent such pleasant days... But on the first Sunday, when I found the whole devout English colony assembled at Divine service, in my mind the past was absorbed in the present: and I voyaged homewards on the «Mongolia» just as cheerfully as I had started off a year and a half before.

In the Red Sea it was now much warmer than it had been on the first occasion: e. g. one day, in my cabin, in a shady place, the thermometer showed 90° F. (= 25° R.). But during the nights spent on the deck the heat was quite tolerable, especially on the windward side.

On May 20, we spent half a day in Aden; on the 21th, we steamed past some volcanic islands in the Red Sea; on the 24th, we anchored at Suez, on the 25th, at Port Said; on the 28th in the morning, we were sailing close to the southern coast of Italy, then headed northwards between Italy and Sicily; the same day, in the afternoon, we advanced amid picturesque scenery, with the smoking volcanic island of Stromboli on our right and the Lipari Islands on our left; on the 29th we saw Sardinia and Corsica; and on the 30th we anchored off Marseilles, our first European port.

In the harbour, shabbily dressed, ragged, dirty fellow-citizens were begging for alms: and their similarly dressed offspring, like so many starving clowns, were dancing a kind of cancan in their endeavour to open our purses. Involuntarily I thought of the islands of the Pa-

cific. Those half-naked brown-skinned creatures, whom we in Europe call savages, never treat us to revolting sights of this kind. In Marseilles, with its beautiful parks, roads and public buildings, I met with beggars at every step. Was it chance that brought them in my path, or are there really so many beggars in this European port? This is a question for statistics to answer. For my part, I can only say that in New Zealand, Australia, and in the islands of the Pacific below the Equator combined, I never opened my purse to give alms as much as I did in this, the first port I saw on my return to Europe.

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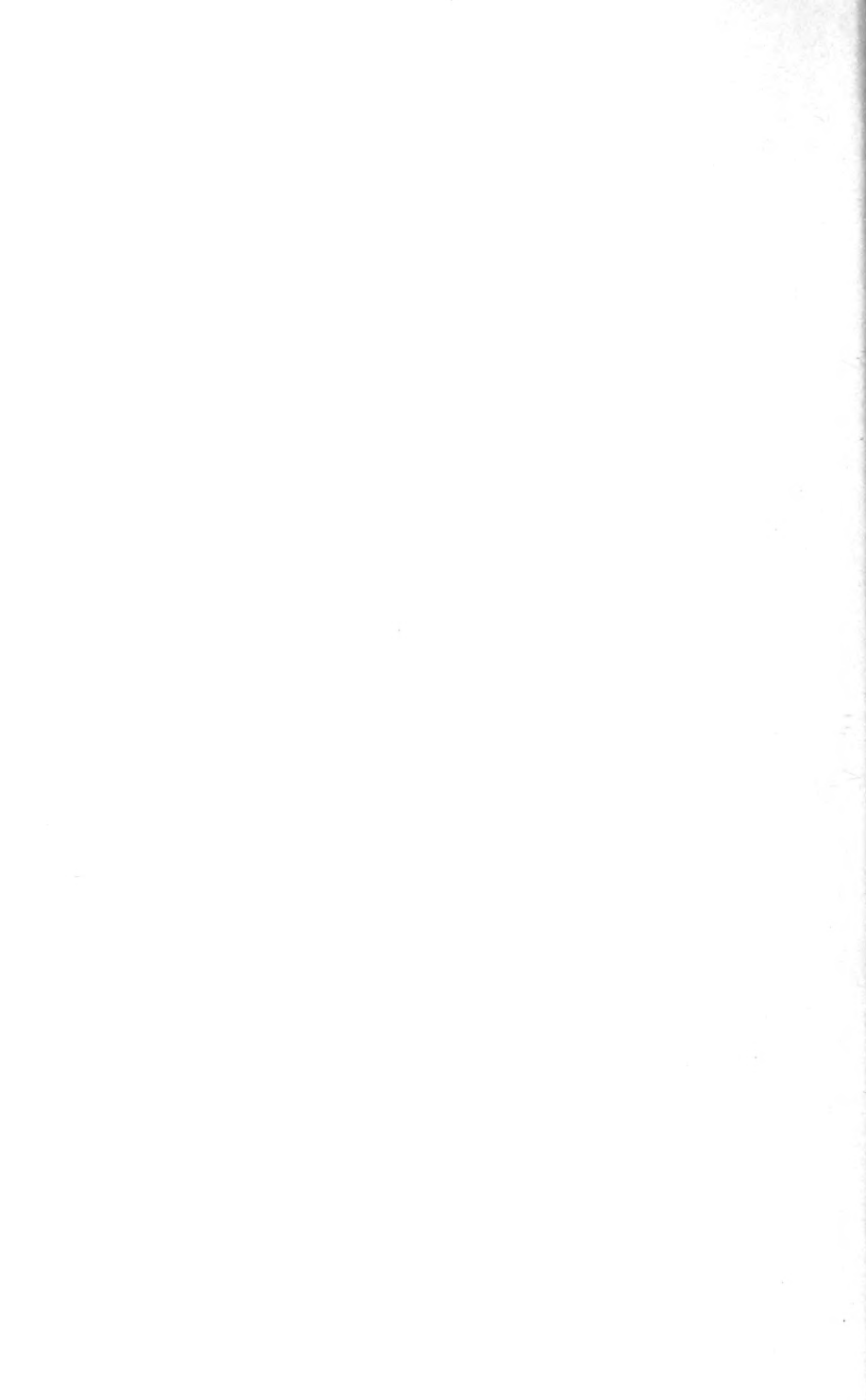
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